S6260-6

STATE OF OHIO
Richard F. Celeste, Governor
Alfred S. Dietzel, Director

Department of Development
P.O. Box 1001 • Columbus, Ohio • 43216-1001

August 15, 1984

The Honorable Richard F. Celeste
Governor
Statehouse
Columbus, Ohio 43215

Dear Governor Celeste:

Pursuant to ORC 4905.14, each public electric and gas utility in Ohio is required to file with the Ohio Department of Development, Division of Energy, a report on July and November 1, containing projections of the utility's total demand and fuel supply over the following 12 months. As required by the same statute, we sent copies of the utilities' latest reports to you in July.

The attached report is a summary and analysis of these reports, also required by 4905.14. It includes an evaluation of the Ohio natural gas and electric situation for the coming winter and the next twelve months. It appears at this time that fuel supplies for manufacturing and heating, and for generating electricity will be adequate, even with a 10 percent colder than normal winter and Ohio's increasing industrial activity.

The only foreseeable supply disruption would be as a result of a prolonged coal miners' strike which could occur when the current United Mine Workers of America contract expires on September 30, 1984. As indicated in the report all Ohio utilities have stockpiles in excess of 60 days.

The Division of Energy in cooperation with the Ohio electric utility industry, other large coal users, the PUCO, and other state agencies, is already prepared to handle any such disruption of coal supplies. A summary of these preparations is included in this report. We are confident that such preparations will assure that no Ohioan suffers undue hardship should a strike occur.

Sincerely,

Al Dietzel

Alfred S. Dietzel
Director

ASD/kt

cc/Thomas Smith, Senate Clerk
Ty Marsh, Clerk of the House
Michael Del Bane, PUCO Chairman

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EXECUTIVE SUMMARY

Based on one year forecasts submitted by each of the major electric and natural gas utility companies serving Ohio, and based on independent projections of the Ohio Division of Energy, the supplies of fuels for generating electricity and supplies of natural gas for heating and manufacturing are forecast to be adequate through June 1985. The forecast takes into account the possibility of a 10 percent colder than normal winter and the increased energy demand resulting from accelerating statewide economic recovery.

Supplies of coal, used to generate more than 95 percent of electricity in Ohio, are not expected to fall below a safe two month supply margin for any generating utility company through June 1985, except for the duration of a possible coal strike when the United Mine Workers of America contract expires September 30, 1984. Seven of the eight major electric utilities in Ohio are projected to have in excess of 85 days supply of coal on October 1, 1984. One utility is projected to have 60 days supply. Under these circumstances no serious curtailments are expected unless there is a prolonged coal strike.

Supplies of the eight major natural gas distribution companies serving the state are expected to be adequate through June 1985. In addition to the actual delivered product, gas in storage will be sufficient to meet additinal demand in the event of a 10 percent colder than normal winter or strong industrial recovery.

As in past years, roughly fifty percent of the coal supplied to Ohio electric utilities is from out of state sources. Approximately ninety percent of Ohio's natural gas supply will continue to come from out of state sources.

Summary of Coal Strike Preparations

Under Ohio Revised Code Section 1551.09, the Department of Development, Division of Energy (DOE) is given reponsibility for management of energy supply emergencies as they occur within the state. DOE is responsible for the promulgation and implementation of energy emergency rules which, upon declaration of an energy emergency by the Governor, may be placed in effect to avoid disproportionate hardships on Ohio energy users. Depending on the fuel experiencing the disruption, other State agencies may be involved with emergency management, as is the case with the Public Utilities Commission of Ohio with regard to potential electric utility coal supply interruptions.

Under this mandate, DOE is currently preparing for a possible disruption of coal supplies due to a strike of the United Mine Workers of America (UMWA). The UMWA's current labor contract with the Bituminous Coal Operators of America (BCOA) will expire September 30, 1984. While the UMWA and the BCOA are currently negotiating the terms of a new multi-year contract, there is no indication to date that any such contract negotiations would be completed and a contract ratified by the UMWA membership by October 1. In past years, a UMWA strike has resulted whenever no new contract is ratified by the end of the current contract's term.

As part of its routine preparations, DOE is following all information obtainable regarding the contract negotiations. Indications are that each side is attempting to reach an agreement before the September 30 deadline. Failing this, the UMWA has given itself the option of striking operating companies on a selective basis, as well as retaining the right to call a general strike similar to those of past years.

While DOE does not expect such a scenario to materialize, preparations have been based upon the worst case scenario of a prolonged strike. Under such a scenario, coal supplies to electric utilities and other large coal users could be severely restricted. Under extreme circumstances, electricity consumers could be affected.

DOE, in cooperation with the PUCO, has begun collecting data on the stockpiles and daily drawdown rates of electric generation station operating utilities. The data show all utilities in the state with stocks sufficiently high to meet a supply disruption of moderate length with no difficulty. DOE has established a mechanism with the utilities to assure that these data continue to be provided in a timely and consistently formatted form throughout the period of any supply disruption.

During any energy supply emergency, it is most essential to assure that the consuming public receive accurate and consistent supply availability information. DOE, the PUCO, and the electric utilities have been working since mid-summer 1984 to assure that a central information clearinghouse is established and working well in advance of any disruption, and continues to operate for the duration of the emergency. DOE will serve as this central clearinghouse, providing information to the Governor, the General Assembly, the PUCO, and the media. Utility provided information will be consistent with that available from DOE. DOE will also serve as principal liaison between the state, the federal government, and other contiguous states concerned with Ohio's handling of the disruption.

DOE prefers to mitigate any energy emergency through voluntary measures for as long as possible. Under such a scheme, Ohioans should be able to go about their "business as usual". However, should for any reason, this potential coal disruption or any other energy supply emergency become threatening to the health or welfare of Ohio energy consumers, the Division is prepared to invoke its mandatory energy emergency management rules. Fortunately, there is no present indication that such drastic measure will be necessary should the potential coal disruption transpire.

An Assessment of the Supplies of Natural Gas and Fuels for Generating Electricity in Ohio from July 1984 - June 1985

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I. INTRODUCTION

This report has been prepared by the Ohio Department of Development, Division of Energy (ODOE), pursuant to Section 4905.14(E) of the Ohio Revised Code. The statute requires ODOE to provide a summary, analysis and recommendations based on the Ohio public utilities' energy supply and demand projections for the twelve month period beginning July 1, 1984. In accordance with Section 4905.14(D), a copy of each utility's July forecast was submitted to the Governor, Clerk of the Ohio Senate, the Legislative Clerk of the Ohio House of Representatives, and the Public Utilities Commission of Ohio on July 10, 1984. The utilities' forecasts and historical data are the primary input for this report. Several other sources of information have also been used, including historical energy data developed by the Ohio Division of Energy, federal energy reports, and publications from the American Gas Association and the Electric Power Research Institute. A substantial and successful effort has been undertaken to develop a comprehensive data base which supports the Division of Energy's ability to provide timely analyses and forecasts.

Objectives

Major objectives guiding the preparation of this report are:

1. To provide historical data on energy usage, projections of energy availability and projections of consumption for the coming year.
2. To provide an analysis and an interpretation of short-term changes in energy supply and demand.
3. To provide an assessment of the adequacy of natural gas and electric energy supply for the upcoming twelve months.
4. To provide a strategy to prevent or mitigate any interruption or curtailment of service, if a potential deficiency is identified.

Requirements and Scope of This Report

Utilities are required to file short-term forecast information by Ohio Revised Code Section 4905.14, effective July 1, 1978. The Division prepares a summary and analysis of this information under paragraph (E) of this section.

The municipal utilities, industrial facilities and the rural electric cooperatives are not required to file the semi-annual report. Accordingly, this report incorporates data from the major electric and gas utilities serving the state. The Ohio Division of Energy estimates that in 1983 the major utilities provided approximately 90 percent of the electricity consumed in the state and 98 percent of the natural gas, excluding self-help gas.

Ohio Division of Energy Forecasts

As part of its analysis, the Ohio Division of Energy makes its own independent forecasts to serve as validation checks. The Division has the capability to forecast monthly demand by utility and for the state as a whole within a reasonable level of error (less than five percent in most cases). Such forecasts are based on historical month-by-month actual consumption for both electricity and natural gas and other appropriate variables such as population, income, and temperature data. As in any forecast, certain important socioeconomic conditions are assumed in the independent forecasts. These assumptions are:

1. Energy consumption generally follows its historical pattern.
2. Socio-economic changes have a minimal effect on short-run energy consumption.

Overview of This Report

The report is divided into two parts: electric energy and natural gas. Materials presented in these two parts are, for the most part, parallel in arrangement. They contain:

(a) a profile of reporting utilities;

(b) historical sources of supplies and suppliers;

(c) consumption history by sector, utility, and state;

(d) the utilities' forecasts and independent forecasts by the Ohio Division of Energy.

Temperature and Energy Consumption

Changes in the observed annual energy requirements of the three major consuming sectors (industrial, commercial, residential) may be explained by a variety of factors. Temperature is a variable which explains much of the observed variation. It is particularly significant in the residential and commercial sectors, during summer and winter periods, when electricity and natural gas are used to maintain comfortable room temperatures.

Two indicators which measure temperature-sensitive energy requirements are heating degree days and cooling degree days. The daily mean temperature is obtained by adding together the maximum and minimum temperatures reported for the day and dividing the total by two. When the daily mean temperature is 65^{0} F, the degree day total is zero. Each degree of mean temperature below 65^{0} F is counted as one heating degree day. This indicator is convenient because the amount of heat required to maintain a certain temperature level is proportional to heating degree days.

The cooling degree days are defined similarly: Each degree of mean temperature above 65° F is counted as one cooling degree day. If the daily mean temperature is 65° F or lower, the cooling degree day total is zero.

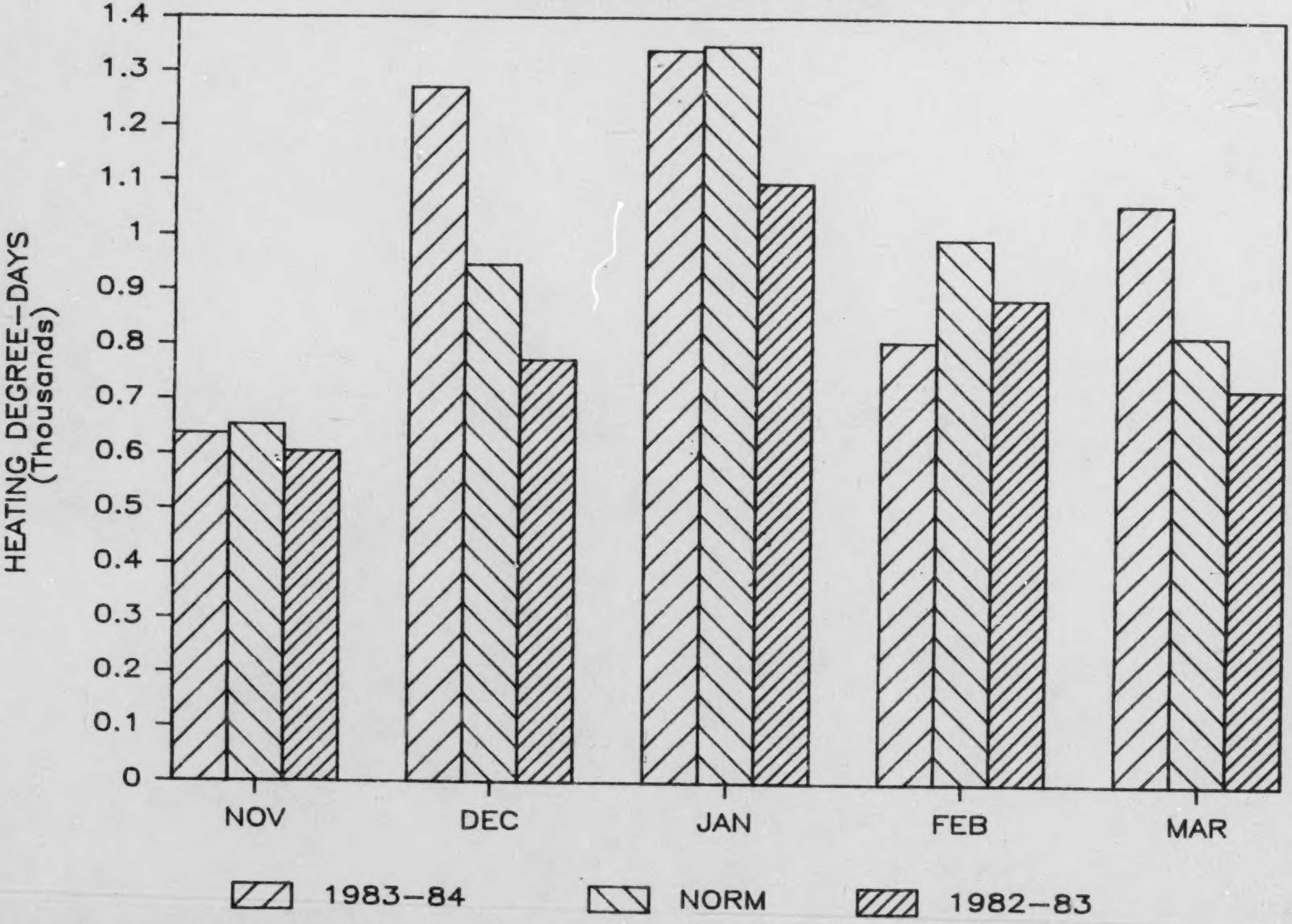
Since most homes and commercial buildings in Ohio are heated by natural gas, the reporting gas utilities are required to submit supply and demand forecasts under a normal winter scenario and a 10 percent colder than normal winter scenario. In addition, the relationship between natural gas consumption and heating degree days is closely monitored during the winter heating season (from November through March). Table 1 and Figure 1 show, for the past two heating seasons, population-weighted state heating degree day summaries. In addition, a normal heating degree day series, defined as the 30-year average of the years 1941 to 1970, is also presented.

TABLE 1. POPULATION-WEIGHTED HEATING DEGREE-DAY SUMMARY FOR OHIO MARCH 1984

MONTH	1983-1984	NORM	1982-1983
NOVEMBER	638	654	606
DEVIATION FROM NORM	-2.5%		-7.3%
DEVIATION FROM PREVIOUS YEAR	5.3%		-4.1%
DECEMBER	1272	948	774
DEVIATION FROM NORM	34.2%		-18.4%
DEVIATION FROM PREVIOUS YEAR	64.3%		-20.3%
JANUARY	1341	1350	1099
DEVIATION FROM NORM	-0.7%		-18.6%
DEVIATION FROM PREVIOUS YEAR	22.0%		-28.4%
FEBRURARY	809	997	888
DEVIATION FROM NORM	-18.9%		-10.9%
DEVIATION FROM PREVIOUS YEAR	-8.9%		-16.7%
MARCH	1062	822	726
DEVIATION FROM NORM	29.2%		-11.7%
DEVIATION FROM PREVIOUS YEAR	46.3%		-11.9%

SOURCE: National Oceanic and Atmospheric Administration, Historical Climatology Series 5-1 and the Ohio Division of Energy.

FIG. 1. POPULATON-WEIGHTED DEGREE-DAYS FOR OHIO WINTER HEATING SEASONS (1982 AND 1983)



II. ELECTRICITY

This section is based on the July forecasts filed by nine major Ohio electric utilities. Two of these, Columbus and Southern Ohio Electric Company and Ohio Power Company, are subsidiaries of the American Electric Power Company. Since American Electric Power operates as a centrally dispatched, integrated distribution system, the report reviews forecasts of demand and fuel adequacy for the entire American Electric Power Company. The Allegheny Power System is also a centralized power generation and distribution system. One subsidiary Monongahela Power, operates in Ohio. Thus, the forecasts of eight utilities are presented in the report. They are:

1. Allegheny Power System (APS)
    - Monongahela Power
    - Other out-of-state utilities not subject to reporting
2. American Electric Power Company (AEP)
    - Columbus and Southern Ohio Electric Company (C&SOE)
    - Ohio Power Company (OP)
    - Other out-of-state utilities not subject to reporting
3. Cincinnati Gas and Electric Company (CG&E)
4. Cleveland Electric Illuminating Company (CEI)
5. Dayton Power and Light Company (DP&L)
6. Ohio Edison Company (and its subsidiary Pennsylvania Power) (OE)
7. Ohio Valley Electric Corporation (OVEC)
8. Toledo Edison Company (TE)

With the exception of OVEC, each of these is an investor-owned utility supplying electricity to residential, commercial, and industrial customers in its service areas. The Ohio Valley Electric Corporation is a single-customer utility supplying power for the uranium enrichment plant at Piketon, Ohio. It also sells surplus generation to other electric utilities.

Supply and Generation

Source/Supplier of Fuel for Electric Generation

Fuels used in Ohio for electric generation include coal, oil, natural gas and nuclear fuel. Nuclear fuel sources are not monitored by the Division. All other fuels are monitored through the utilities' monthly reports. Tables 2 and 3 (following) list coal and oil deliveries to power plants located in Ohio. The main sources of supply and/or suppliers of these fuels remain the same as in the last reporting period.

Coal deliveries to Ohio electric plants during the twelve months ending April 1984, increased by 5,213,900 tons from the previous twelve month period, an increase of 13.1 percent (Table 2 and Figure 2). Deliveries of oil to Ohio power plants decreased by 247.7 barrels during the twelve months ending April 1984 from the previous twelve month period, a decrease of 33.0 percent (Table 3 and Figure 3). The increase in coal deliveries is attributable to increased generation over the previous twelve month period, while the decrease in oil deliveries was occasioned by a significantly large purchase of oil by the Ohio Edison Company in August 1982.

Electric Generation by Type of Fuel

Coal remains the main source of fuel for electric generation in Ohio, a condition which is not expected to change in the future. In the twelve month period ending April 1984, 96.0 percent of the total electricity generated in Ohio was from coal. Electricity generated by gas and oil continues to be a negligible 0.1 percent of total generation. Nuclear-generated electricity accounted for 3.9 percent of electricity generated in the state in the twelve months ending April 1984. From April through August 1982, Davis-Besse was inoperative due to a shut down for maintenance. It began generating electricity in September 1982 and was off line for refueling in July 1983. Operations resumed in September 1983 with the next refueling scheduled for August 1984. Operations are expected to resume in November 1984.

Table 4 and Figure 4 show the combined monthly totals of the reporting utilities' net generation from Ohio plants. Historical power plant fuel consumption and fuel stocks are displayed in Table 5.

Historical Behavior of Sectoral Requirements

Since the 1973 OPEC oil embargo and because of the escalation of energy prices, the pattern of electricity consumption in Ohio has changed dramatically. Increasing prices have stimulated conservation activities and fostered economic conditions that have resulted in reduced growth rates in the demand for electricity.

Electricity consumption by the residential and commercial sectors exhibits regular seasonal patterns while the industrial sector fluctuates widely with general economic conditions. (See Appendix A). The mild winter of 1982-83 resulted in decreased residential sector consumption, particularly during the months of January through March (Table 6 and Figure 5A). The relatively severe weather of December 1983 and March 1984 resulted in increased residential consumption. In December 1982, industrial electricity consumption dipped lower than any previously recorded consumption level since January 1971. A severe downturn in the manufacturing sector, particularly in automobile-related industries, had resulted in a monthly industrial demand level of 3100 to 3400 megawatt-hours. Beginning in 1983 with the general economic recovery, industrial demand for electricity has gradually increased. The March consumption of 4020 megawatt-hours is the highest monthly industrial consumption since March 1981.

For the twelve month period ending in April 1984, total electricity consumption in the state was 10.5 percent higher than during the preceding twelve month period (see Table 6 and (Figures 5A, 5B). Comparing 1982-83 with 1983-84 usage, residential sector consumption rose 8.2 percent, commercial sector consumption rose 5.9 percent and industrial sector consumption rose 16.2 percent.

Twelve Month Electricity Demand Forecasts

Each electric utility submits a forecast of total service area demand for July 1984 through June 1985. These forecasts are displayed in Appendix A, Tables A-1 through A-8, along with independent forecasts prepared by the Ohio Division of Energy. The Ohio Division of Energy also prepares independent twelve month forecasts of electricity demand for the state of Ohio, by sector. These forecasts are displayed in Appendix A, Tables A-9 through A-12.

Electric Demand Forecasts by Utility Service Area

The Ohio Division of Energy utility service area forecasts are based on monthly data from utility reports from January 1970 through March 1984. No independent forecast is provided for OVEC, because this utility has only one customer whose demand is pre-arranged. Because of the overlapping months for utility forecasts submitted on July 1 and November 1, the utilities may elect to use their previous forecasts for those overlapping months in the new forecasting period.

Two utilities, Allegheny Power System and Cincinnati Gas and Electric, retained their forecasts submitted in November for the months July 1984 through October 1984. Six utilities adjusted their forecasts. American Electric Power, Dayton Power and Light, and Toledo Edison raised each months's forecast for an average change of 7.1, 2 and 2.2 percent, respectively. Cleveland Electric Illuminating, Ohio Edison and Ohio Valley Electric Corporation raised some forecasts and lowered others for an average change of .4, .7 and -1.6 percent, respectively.

The forecasts prepared by ODOE have been revised since November. The ODOE forecast for each month is generally higher than the corresponding forecast of Allegheny Power System, Cleveland Electric Illuminating, Cincinnati Gas and Electric, and Ohio Edison. American Electric Power, Dayton Power and Light, and Toledo Edison have submitted forecasts that are higher than ODOE's forecast for some months and lower than ODOE's forecast for some months. (See Appendix A).

Assessment of Utility Fuel Adequacy

Tables 7-A and 7-B present the utilities' projections of deliveries, consumption, and end-of-month stocks of coal and oil for the generation of electricity. Table 7-C presents the Division's independent assessment of the adequacy of supply of generating fuels. The Division's projections are presented for the CAPCO Group of utilities, which include Cleveland Electric Illuminating, Ohio Edison, and Toledo Edison; for the American

Electric Power and Allegheny Power Systems, and for Dayton Power and Light, Cincinnati Gas and Electric, and the Ohio Valley Electric Corporation.

Coal

The Division's projections, as well as those of the electric utilities indicate an adequate supply of coal throughout the forecast period for each utility serving the state.

The current United Mine Workers of America contract expires September 30, 1984. Contract negotiations began May 9, 1984. Few statements have been made by negotiators about the substance of the talks since they began. But it is expected that neither side will begin to bargain in earnest until the expiration of the current contract is imminent. In the meantime, large coal users, such as electric utilities and major manufacturers, continue to stockpile coal in anticipation of a strike.

The Division of Energy is monitoring the contract negotiations closely and is coordinating Ohio's preparations for a strike with representatives of the state's electric utilities, mine workers, coal producers, and large coal users. Periodic public statements concerning any significant developments will be released as October approaches.

To derive the Ohio Division of Energy projections, average daily requirements of coal were determined by dividing projected monthly coal consumption by the number of days in the month. End-of-month stocks were derived by considering consecutively end of June 1983 stocks, projected monthly coal delivery schedules as submitted by the utilities, and projected monthly coal consumption levels. Number of days' supply of coal was estimated on the basis of average daily requirements in subsequent months and the level of end-of-month stocks for the month in question.

Coal consumption projections were made through the use of a formula which adjusts coal consumption levels for changes in the consumption of oil, natural gas, and nuclear fuel in a manner that is consistent with the projected demand or net energy for load. In making these projections, it is assumed that the following conditions will be satisfied:

1. Monthly demand (net energy for load) for July 1984 through June 1985 will be realized in the manner projected by the utility companies.
2. Energy required to supply projected net energy for load in a given month from July 1984 through June 1985 will be proportional to the energy consumed in supplying the actual net energy for load in the previous twelve month period.
3. Monthly delivery schedules for all fuels in 1984 and 1985 will be met in the manner projected by the utility companies.
4. With the exception of Toledo Edison, all of the electricity required to meet the net energy for load projection will be generated by coal.

The end-of-month stock and burn-day projections indicate that, under normal burning conditions, all of the utilities will have at least 60 days supply of coal on October 1, 1984. Two utilities, Cincinnati Gas and Electric and Toledo Edison, are projected to fall below 60 days in November and December. As the date of expiration of the UMWA contract approaches, all of the stocks will be closely monitored. Utilities with low burn-days projections will be contacted to ascertain the adequacy of their supply.

Oil

Each electric utility forecasts an adequate supply of oil for the generation of electricity throughout the forecast period. The decline in oil usage in Ohio has resulted in net generation from oil of less than 1%

of total net generation. Currently oil is being used as a start-up fuel and in peaking units. Due to the currently high reserve margins for all utilities, the Division does not anticipate that the utilities will generate much electricity from peaking units and consequently our projections indicate that there will be an adequate supply of oil, under normal generating conditions.

If there is a prolonged coal strike, the utilities may wish to use more oil in order to conserve coal stocks. Oil is currently available on the spot market if such a need should arise. In the event that a strike occurs the Division will closely monitor the monthly oil stocks to ensure their adequacy.

TABLE 2. SOURCE OF COAL SUPPLY TO ELECTRIC UTILITIES
OHIO PORTION
1000 Short Tons

Month	1	2	3	4	6	7&8	9	Other	Total
1982									
January	0.0	128.4	23.9	2,019.3	222.7	1,097.7	103.7	200.2	3,795.9
February	0.0	123.0	19.4	2,137.4	388.2	1,187.4	51.2	191.7	4,098.3
March	0.0	173.4	27.9	2,303.4	382.9	1,505.2	56.7	237.9	4,687.4
April	0.0	136.9	37.3	2,031.0	237.3	1,457.9	109.8	168.8	4,179.0
May	0.0	109.5	40.3	1,554.9	200.8	1,058.5	28.6	150.8	3,143.4
June	0.7	121.7	31.0	1,976.6	170.0	1,090.1	97.3	134.0	3,620.7
July	0.0	139.0	12.5	1,537.3	126.3	590.8	76.4	131.8	2,614.1
August	0.0	134.7	4.3	1,998.6	317.3	1,299.2	79.6	178.7	4,012.4
September	0.0	139.2	36.4	1,982.4	285.8	1,094.8	67.5	184.8	3,790.9
October	0.0	173.4	7.1	1,879.1	346.1	859.7	77.6	64.4	3,407.4
November	0.0	205.9	33.1	1,973.1	306.1	1,202.3	118.2	58.2	3,896.9
December	0.0	136.0	42.3	1,770.8	297.8	1,106.2	100.2	161.4	3,614.7
Total	0.7	1,721.1	315.5	23,163.9	3,281.3	13,549.8	966.8	1,862.7	44,861.1
% of Total	.0	3.8	0.7	51.6	7.3	30.2	2.2	4.2	100.0
1983									
January	0.0	105.8	37.9	1,865.6	292.9	938.4	62.2	239.7	3,542.5
February	0.0	76.0	25.0	1,608.6	291.9	793.3	9.0	102.1	2,905.9
March	0.0	109.1	9.1	1,274.6	349.9	973.2	5.8	98.7	2,820.4
April	0.0	85.5	14.7	1,438.8	240.0	685.5	12.0	0.0	2,476.5
May	0.0	166.3	26.7	1,937.3	264.2	1,003.2	4.4	1.5	3,403.6
June	0.0	160.7	38.0	1,945.5	140.5	991.0	29.9	6.3	3,311.9
July	0.0	172.4	37.5	1,792.4	73.6	872.4	58.7	0.0	3,007.0
August	0.0	267.1	56.6	2,172.1	185.5	1,234.3	48.7	4.4	3,968.7
September	0.0	222.5	47.0	2,039.4	216.5	1,056.5	7.8	0.0	3,589.7
October	0.0	199.5	31.9	2,084.5	282.7	1,079.5	0.0	0.0	3,678.1
November	0.0	207.6	21.5	1,961.4	267.1	1,113.0	37.0	4.8	3,612.4
December	0.0	155.9	25.6	1,895.0	270.6	1,188.1	143.3	0.0	3,678.5
Total	0.0	1,928.4	371.5	22,015.2	2,875.4	11,928.4	418.8	457.5	39,995.2
% of Total	0.0	4.8	0.9	55.0	7.2	29.8	1.0	1.1	100.0
1984									
January	0.0	196.9	36.0	2,144.9	310.4	1,272.5	46.1	0.0	4,006.8
February	0.0	211.7	42.4	2,337.8	384.1	1,302.1	40.2	0.0	4,318.3
March	0.0	258.9	62.5	2,499.4	387.1	1,170.7	59.1	0.0	4,437.7
April	0.0	206.8	44.3	2,248.9	466.3	1,064.3	16.4	0.0	4,047.0

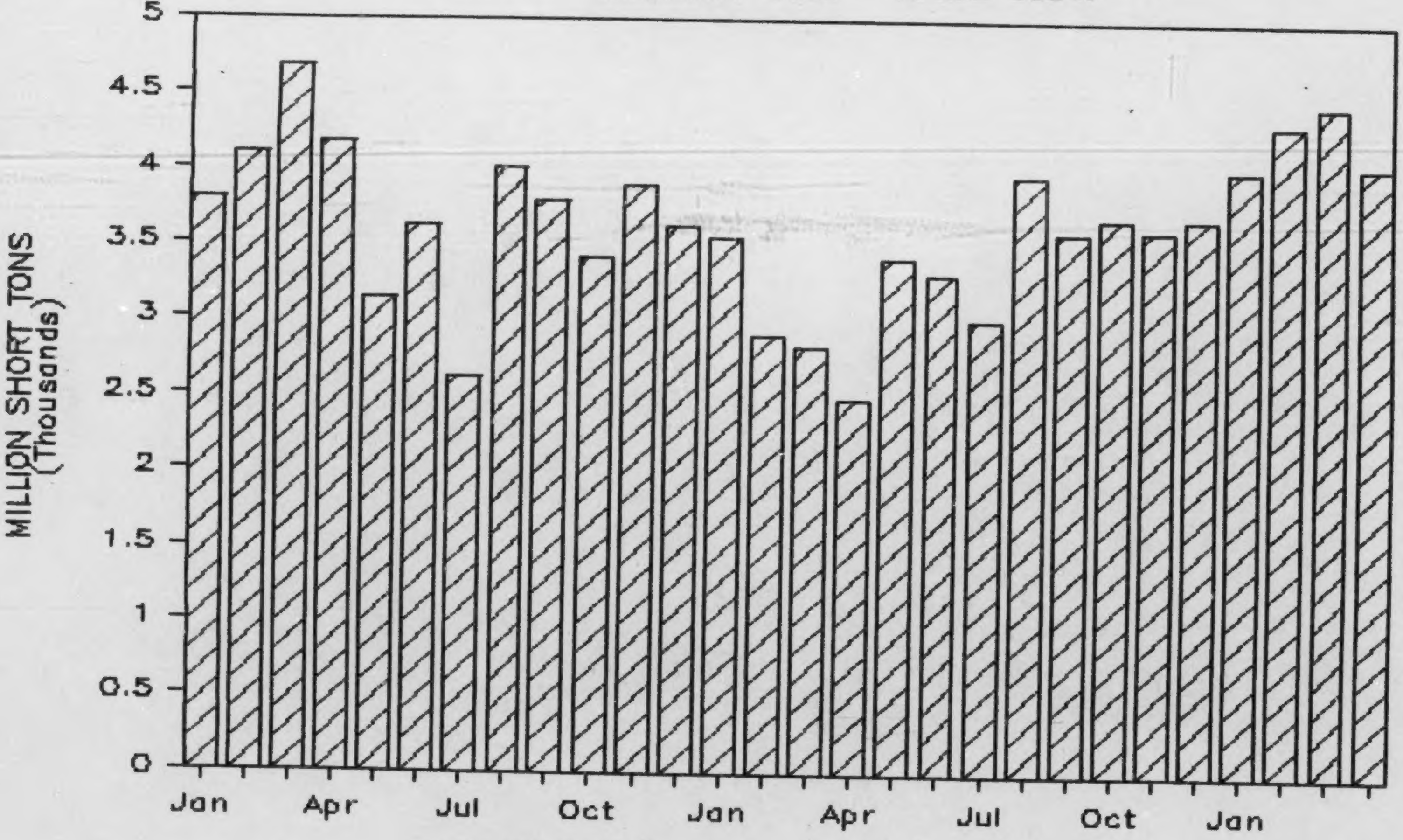
District

1. Eastern Pennsylvania
2. Western Pennsylvania
3. Northern West Virginia
4. Ohio
6. Panhandle (in West Virginia)
7. Southern No. 1 (in West Virginia and Virginia)
8. Southern No. 2 (in West Virginia and Eastern Kentucky)
9. Western Kentucky

Other - Primarily from Wyoming and Utah

Source: Form FPC 423

FIG. 2. MONTHLY COAL DELIVERIES TO POWER PLANTS IN OHIO
(JANUARY 1982 - APRIL 1984)



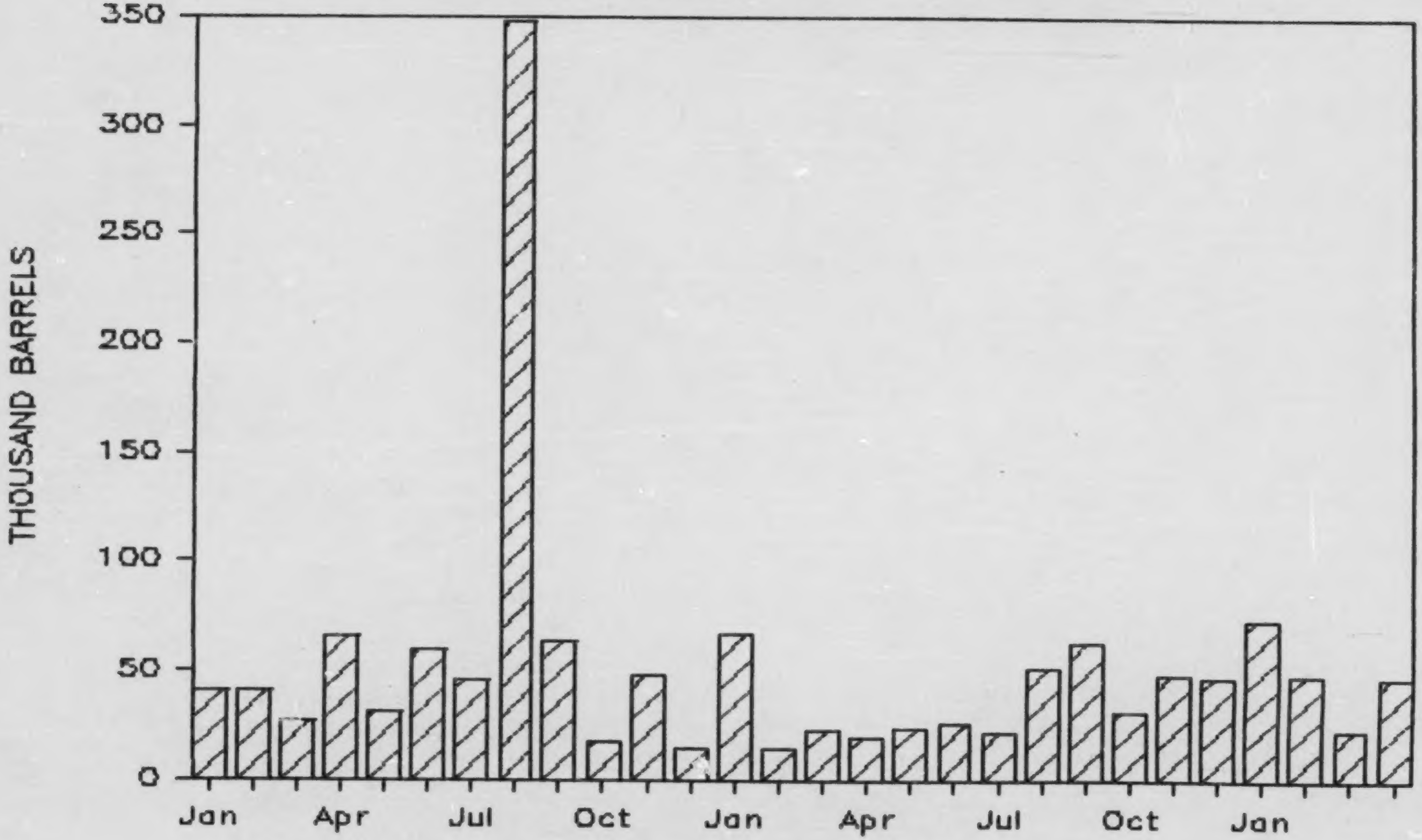
SOURCE: THE OHIO DIVISION OF ENERGY

Table 3. Major Oil Suppliers to Electric Utilities
Ohio Portion
(Thousand Barrels)

	Allied	Marathon	Standard	Union	Other	Total
1982						
January	35.9	0.2	2.8	1.8	0.0	40.7
Feburary	34.7	0.2	2.3	2.9	0.0	40.1
March	21.8	0.0	3.4	1.5	0.0	26.7
April	62.8	0.0	1.8	0.9	0.0	65.5
May	26.8	0.0	2.3	2.2	0.0	31.3
June	50.6	0.0	6.5	1.8	0.0	58.9
July	35.7	0.2	7.9	2.3	0.0	46.1
August	140.2	0.0	204.6	2.8	0.0	347.6
September	58.5	0.6	3.4	1.2	0.0	63.7
October	13.5	0.0	2.5	1.7	0.0	17.7
November	42.2	0.0	2.5	3.0	0.0	47.7
December	9.4	0.0	1.9	2.8	0.0	14.1
Total	532.1	1.2	241.9	24.9	0.0	800.1
% of Total	66.5	0.1	30.2	3.1	0.0	100.0
1983						
January	36.5	18.1	9.1	3.0	0.0	66.7
Feburary	7.3	0.2	5.2	2.0	0.0	14.7
March	7.0	0.6	11.1	2.0	2.0	22.7
April	6.8	0.2	9.5	2.0	1.0	19.5
May	9.2	0.4	8.5	4.0	2.1	24.2
June	10.9	0.0	11.0	4.0	0.0	25.9
July	11.5	0.2	6.7	3.0	0.0	21.4
August	38.8	0.4	4.0	3.0	5.2	51.4
September	52.4	0.2	5.1	0.0	4.9	62.6
October	14.0	0.4	14.6	1.0	1.7	31.7
November	35.7	0.2	6.1	3.0	2.6	47.6
December	18.4	0.0	16.2	2.0	10.5	47.1
Total	508.6	20.9	90.9	27.0	19.5	666.9
% of Total	76.3	3.1	13.6	4.0	2.9	100.0
1984						
January	66.0	0.2	2.4	3.0	2.0	73.6
February	38.9	0.4	2.8	1.0	5.2	48.3
March	12.8	0.4	4.5	2.0	2.7	22.4
April	40.6	3.3	0.0	0.0	2.9	46.8

Source: Form FPC 4 and the Ohio Division of Energy

FIG. 3. MONTHLY OIL DELIVERIES TO POWER PLANTS IN OHIO
(JANUARY 1982 - APRIL 1984)



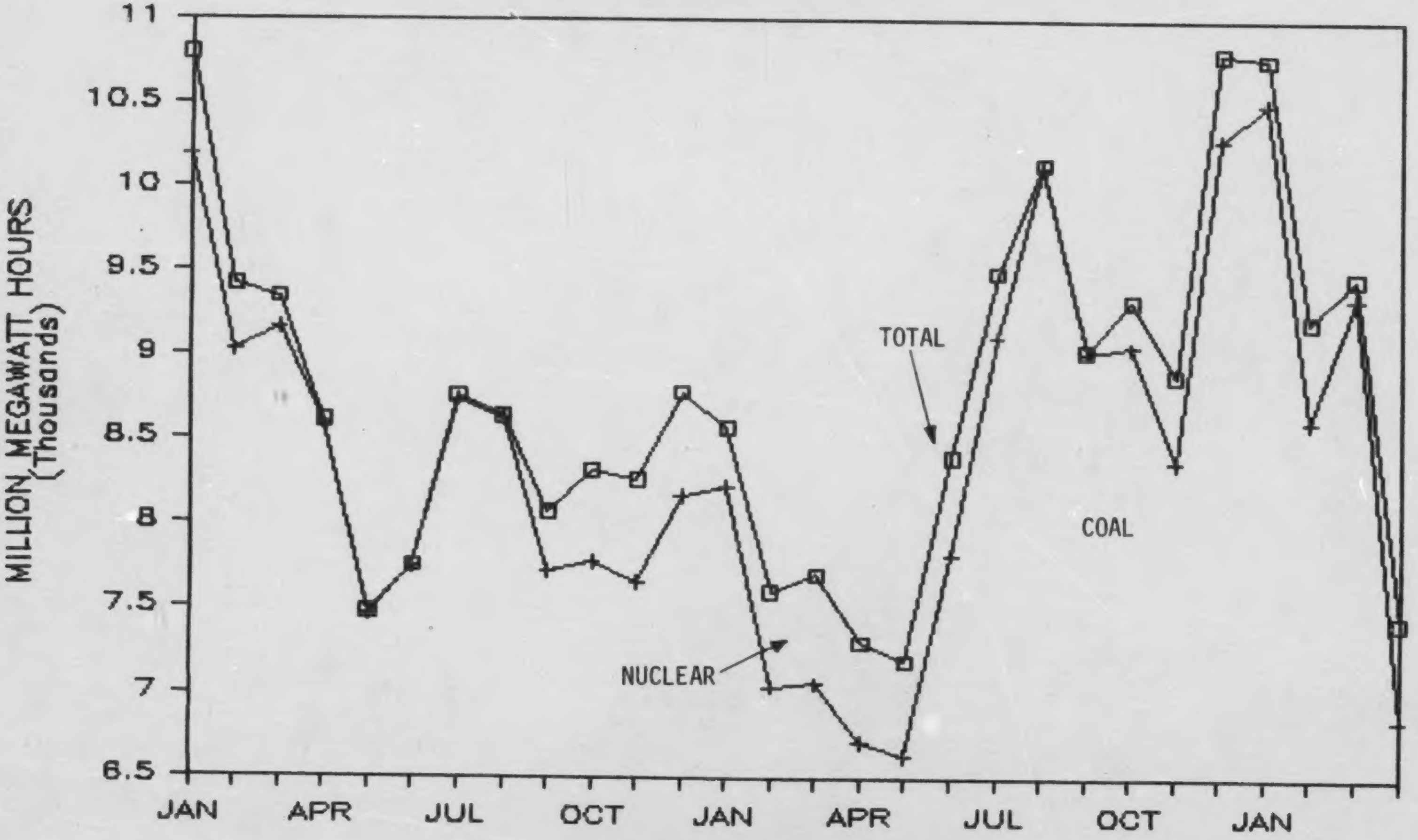
SOURCE: THE OHIO DIVISION OF ENERGY

Table 4. Major Ohio Utilities - Net Generation by Types of Fuel (Ohio Portion) (Thousand MWH)

1982	COAL	OIL	GAS	NUCLEAR	TOTAL
January	10194	27	3	576	10800
February	9026	6	2	386	9420
March	9170	8	3	165	9346
April	8593	14	3	0	8610
May	7464	13	3	0	7480
June	7750	6	0	0	7756
July	8741	11	5	0	8757
August	8627	12	3	0	8642
September	7726	8	1	343	8078
October	7778	2	1	537	8318
November	7653	2	0	604	8259
December	8165	0	0	615	8780
Total	100887	109	24	3226	104246
% of Total	96.78	0.10	0.02	3.09	100.00
1983					
January	8219	-3	1	357	8574
February	7041	-1	0	560	7600
March	7055	1	1	647	7704
April	6716	8	1	574	7299
May	6630	4	-9	567	7192
June	7822	7	2	567	8398
July	9114	9	4	370	9497
August	10124	16	3	0	10143
September	9023	5	1	0	9029
October	9054	5	1	271	9331
November	8368	6	4	506	8884
December	10290	14	4	487	10795
Total	99456	71	13	4906	104446
% of Total	95.22	0.07	0.01	4.70	100.00
1984					
January	10503	9	4	249	10765
February	8608	2	0	596	9206
March	9344	4	2	111	9461
April	6847	4	1	579	7431

Source: Form FPC 4 and the Ohio Division of Energy

FIG. 4. NET GENERATION BY TYPE OF FUEL, OHIO PORTION OF MAJOR OHIO ELECTRIC UTILITIES (JANUARY 1982 - APRIL 1984)



SOURCE: FORM FPC 4

Table 5. Major Ohio Utilities
Fuel Consumption and Stocks
(Ohio Portion)

	Coal (Thousand Tons)		Oil (Thousand 42-Gal. Bbls.)		Gas (MMCF)
1982	**Burned**	**In Stock**	**Burned**	**In Stock**	**Burned**
January	4,629.5	9,351.6	147.9	735.8	119.0
February	4,334.6	9,241.2	71.1	721.3	59.0
March	4,072.6	9,866.8	67.0	723.1	68.0
April	3,832.1	10,153.7	74.1	762.0	73.0
May	3,191.5	10,304.0	75.0	698.4	38.0
June	3,412.2	10,762.3	78.7	733.2	23.0
July	4,023.2	9,239.8	61.8	755.0	25.0
August	3,880.1	9,147.0	74.2	716.6	85.0
September	3,494.3	9,630.0	51.9	779.2	35.4
October	3,453.1	9,814.9	55.7	744.3	34.0
November	3,271.3	9,563.6	72.1	1,456.5	35.4
December	3,591.4	10,082.9	36.5	1,074.5	24.7
Total	45,185.9	117,157.8	866.0	9,899.9	619.5
Avg/Month	3,765.5	9,763.2	72.2	825.0	51.6
1983					
January	3,582.2	9,807.8	51.1	1,470.5	45.5
February	3,068.6	9,694.0	43.5	1,468.1	17.0
March	3,076.2	9,378.9	39.7	1,468.5	42.5
April	2,920.4	9,649.2	48.8	624.9	39.6
May	2,851.0	10,308.8	52.9	410.6	25.6
June	3,347.7	10,363.6	45.3	386.0	68.6
July	3,953.3	9,440.7	57.7	378.4	86.5
August	4,416.1	9,038.8	64.0	365.0	76.5
September	3,902.5	8,567.9	38.2	324.8	22.8
October	3,934.2	8,458.8	41.0	385.0	33.0
November	3,623.0	8,502.4	48.9	408.6	75.8
December	4,561.6	7,487.1	75.3	326.3	81.8
Total	43,236.8	110,698.0	606.4	8,016.7	615.2
Avg/Month	3,603.1	9,224.8	50.5	668.1	51.3
1984					
January	4,635.1	6,913.0	58.3	396.7	76.0
February	3,756.3	7,364.0	54.3	390.5	14.0
March	4,113.5	7,793.7	16.6	397.7	56.1
April	2,977.2	8,445.0	34.8	388.6	44.7

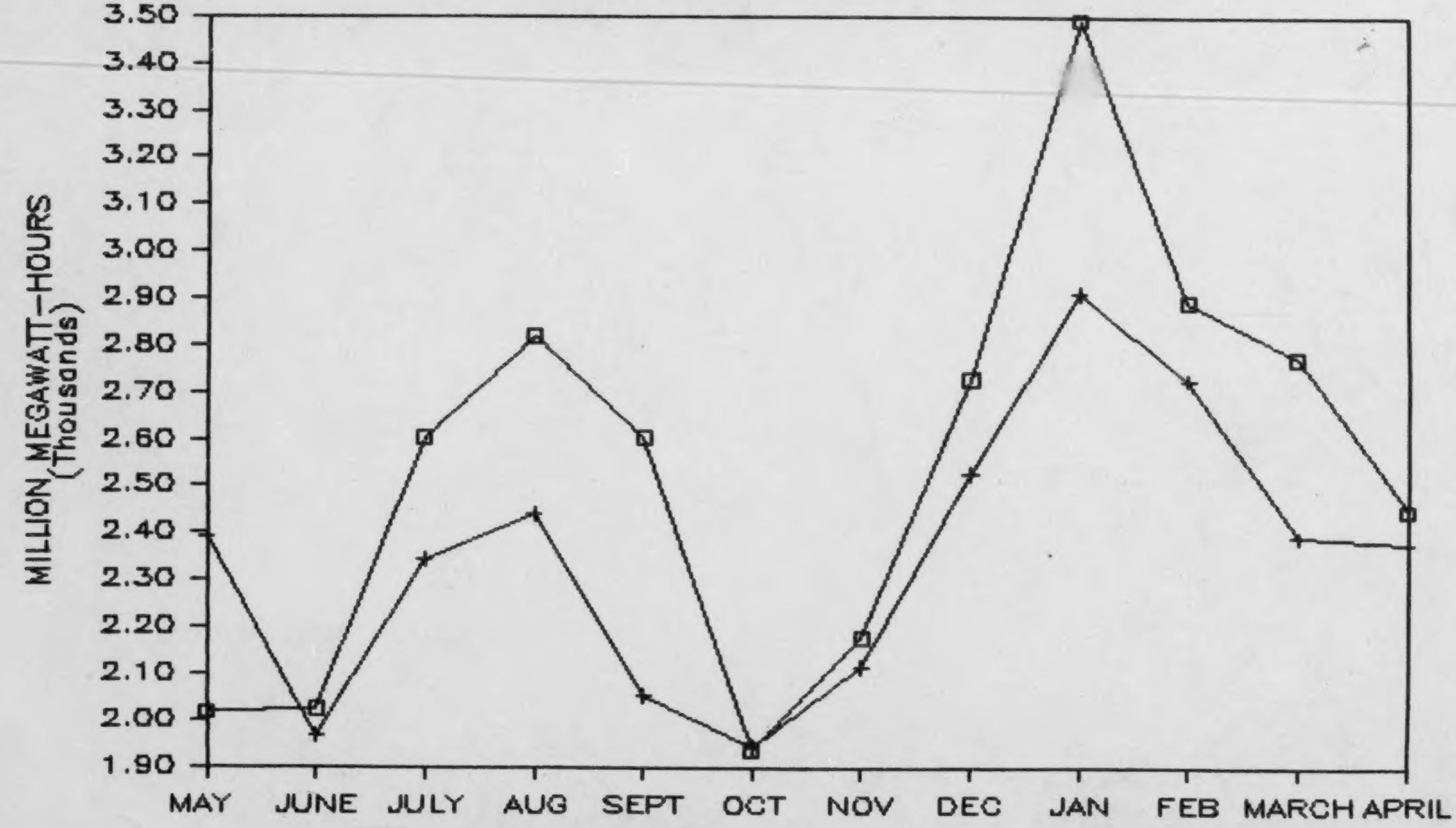
Source: Form FPC 4 and the Ohio Division of Energy

Table 6. Ohio Electricity Consumption
May 1982 - April 1984
(Thousand MWH)

	May	June	July	August	September	October	November	December	January	February	March	April	Total
Residential													
1983-84	2016.9	2023.7	2603.0	2817.6	2604.2	1935.6	2177.7	2727.2	3491.7	2890.9	2771.2	2448.2	30507.9
1982-83	2392.7	1964.8	2345.8	2440.8	2052.2	1943.4	2113.9	2527.4	2909.8	2725.6	2390.5	2378.3	28185.2
% Change	-15.7	3.0	11.0	15.4	26.9	-0.4	3.0	7.9	20.0	6.1	15.9	2.9	8.2
Commercial													
1983-84	1604.0	1758.9	2047.1	2125.4	2060.0	1716.0	1677.7	1850.2	2048.1	1901.8	1889.0	1711.5	22389.7
1982-83	1632.7	1770.5	1925.7	1946.0	1805.8	1673.0	1624.5	1743.6	1838.6	1778.8	1739.6	1661.4	21140.2
% Change	-1.8	-0.7	6.3	9.2	14.1	2.6	3.3	6.1	11.4	6.9	8.6	3.0	5.9
Industrial													
1983-84	3342.5	3374.8	3280.9	3542.1	3616.3	3606.7	3554.0	3446.8	3707.8	3718.9	4020.3	3927.2	43138.3
1982-83	3217.5	3295.3	3075.7	3196.4	3107.5	3014.8	2910.7	2779.2	2921.2	3102.7	3301.5	3201.3	37123.8
% Change	3.9	2.4	6.7	10.8	16.4	19.6	22.1	24.0	26.9	19.9	21.8	22.7	16.2
Other													
1983-84	386.0	404.8	410.2	437.6	432.0	412.5	444.3	480.8	497.7	425.7	424.1	380.5	5136.2
1982-83	408.8	423.5	399.1	396.7	395.0	424.7	441.4	469.2	487.2	451.5	450.6	399.4	5147.1
% Change	-5.6	-4.4	2.8	10.3	9.4	-2.9	0.7	2.5	2.2	-5.7	-5.9	-4.7	-0.2
Total													
1983-84	7349.4	7562.2	8341.2	8922.7	8712.5	7670.8	7853.7	8505.0	9745.3	8937.3	9104.6	8467.4	101172.1
1982-83	7651.7	7454.1	7746.3	7979.9	7360.5	7055.9	7090.5	7519.4	8156.8	8058.6	7882.2	7640.4	91596.3
% Change	-4.0	1.5	7.7	11.8	18.4	8.7	10.8	13.1	19.5	10.9	15.5	10.8	10.5
Customers (1000's)													
Residential	3473.4	3469.5	3466.7	3467.6	3469.2	3474.3	3478.3	3485.3	3490.2	3493.5	3496.1	3496.2	41760.1
Commercial	355.0	356.1	356.1	356.2	356.3	356.6	355.5	355.7	356.4	356.1	355.7	356.2	4272.0
Industrial	24.8	24.8	24.7	24.7	24.8	24.8	25.0	25.1	25.2	25.4	25.5	25.8	300.6
Total	3853.2	3850.3	3847.6	3848.6	3850.3	3855.7	3858.8	3866.1	3871.8	3875.0	3877.3	3878.1	46332.8

Source: The Ohio Electric Utility Institute: Monthly Summaries

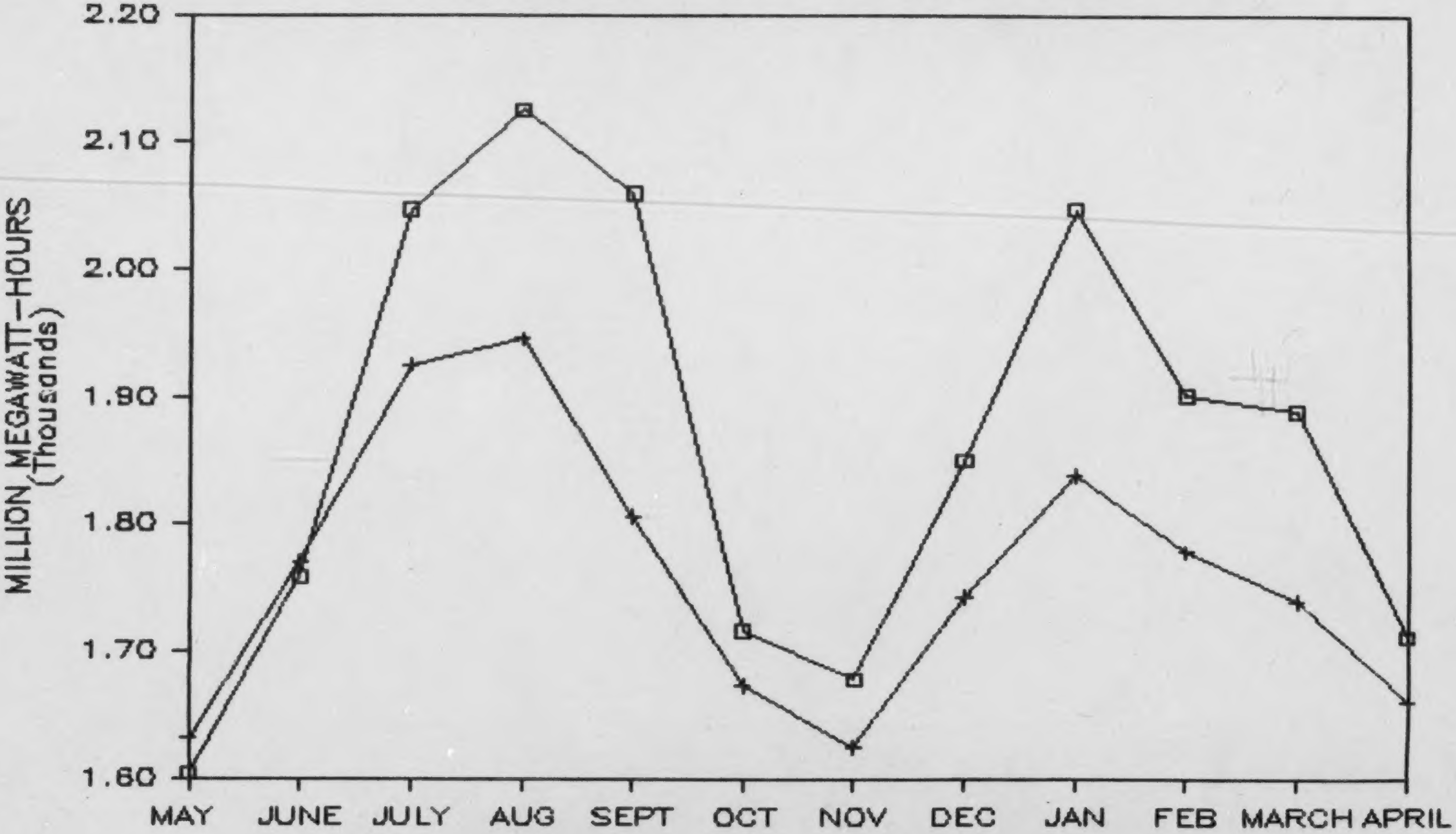
FIG. 5A. OHIO RESIDENTIAL SECTOR ELECTRICITY CONSUMPTION
(1982 - 1983 VS. 1983 - 1984)



Source: The Ohio Electric Utility Institute: Monthly Summaries

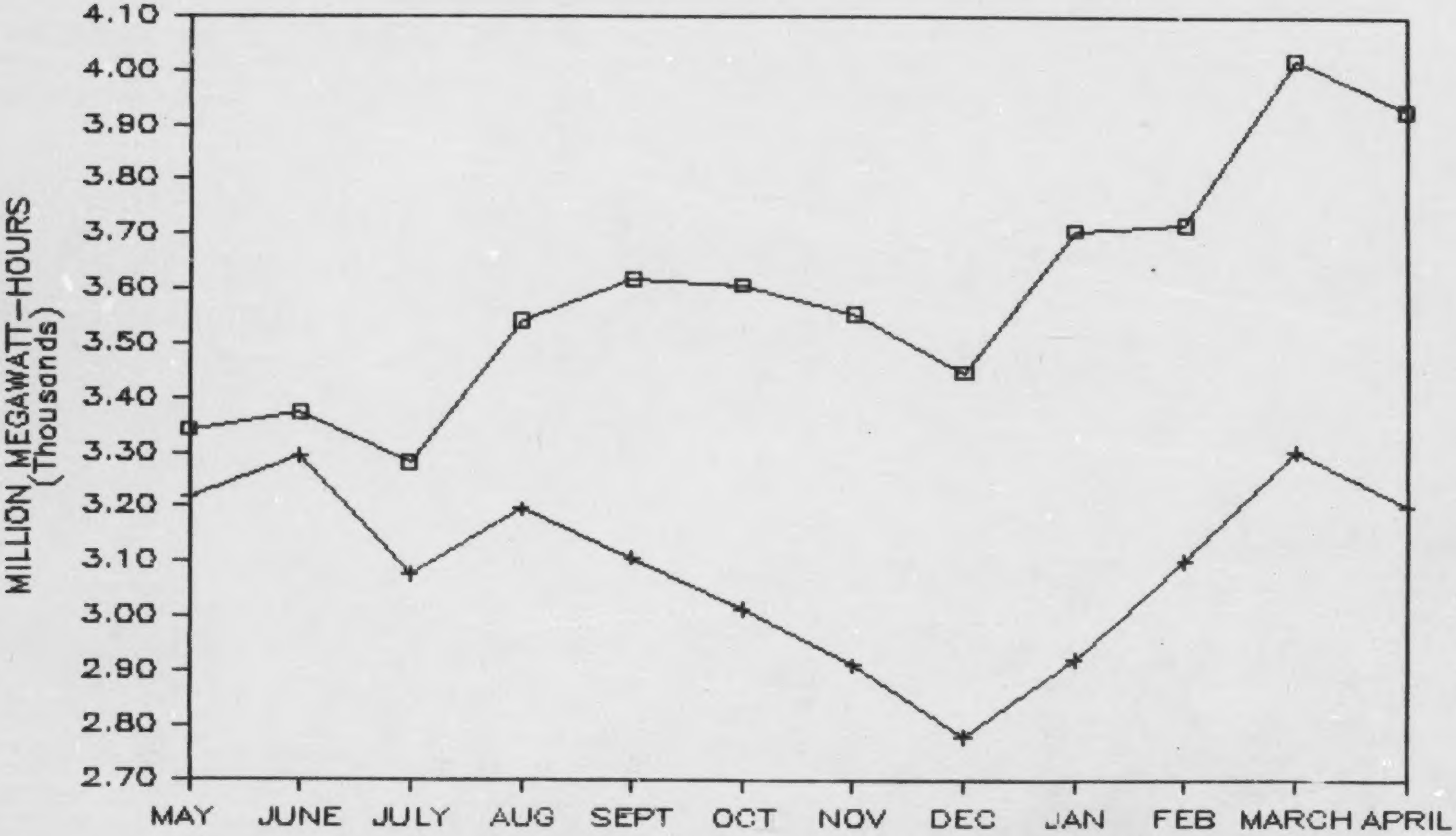
□ 1983—1984 + 1982—1983

FIG. 5B. OHIO COMMERCIAL SECTOR ELECTRICITY CONSUMPTION
(1982 - 1983 VS. 1983 - 1984)



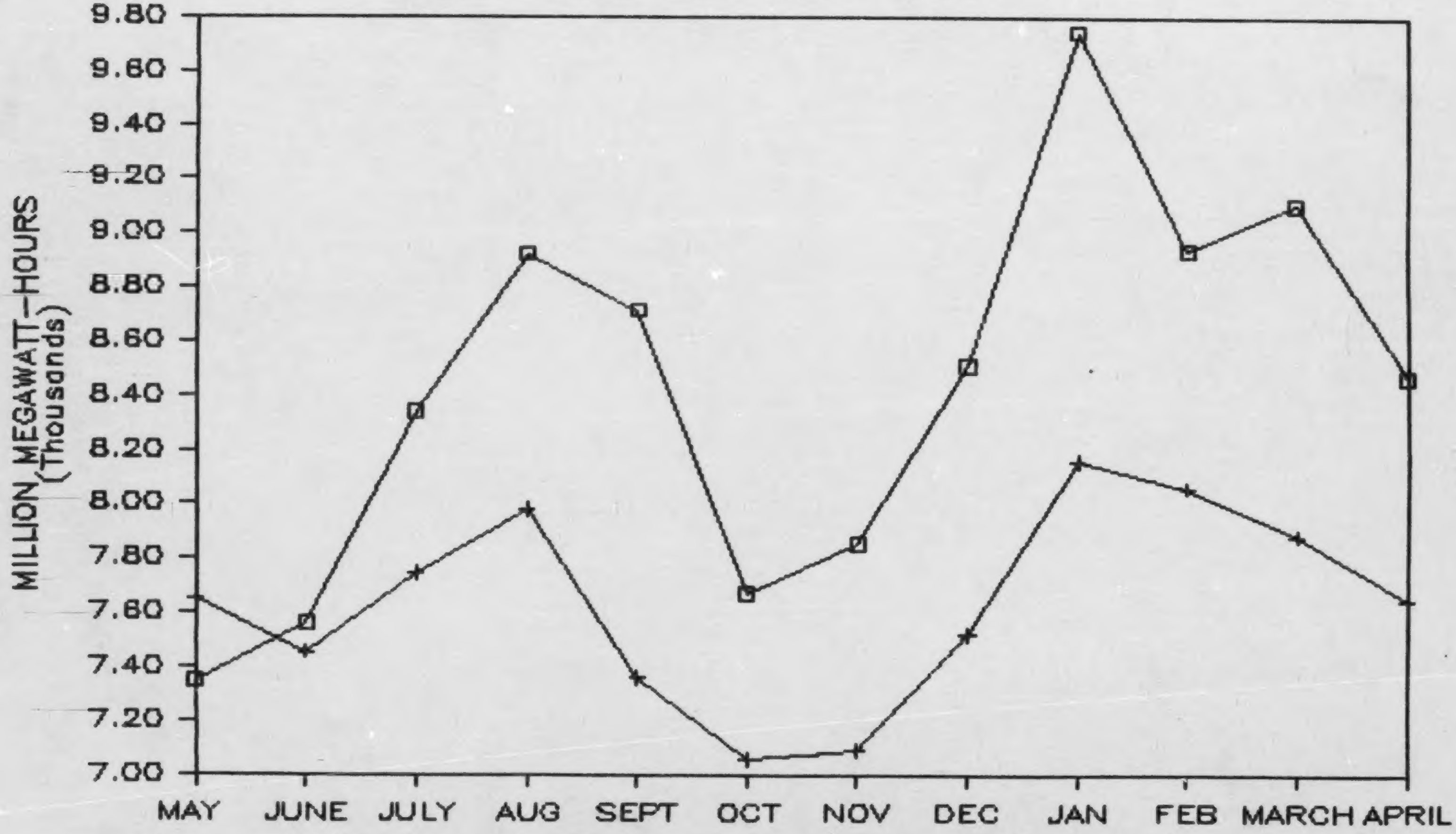
Source: The Ohio Electric Utility Institute: Monthly Summaries

FIG. 5C. OHIO INDUSTRIAL SECTOR ELECTRICITY CONSUMPTION
(1982 - 1983 VS. 1983 - 1984)



Source: The Ohio Electric Utility Institute: Monthly Summaries

FIG 5D. TOTAL OHIO ELECTRICITY CONSUMPTION
(1982 - 1983 VS. 1983 - 1984)



Source: The Ohio Electric Utility Institute: Monthly Summaries

□ 1983—1984 + 1982—1983

Table 7-A. Ohio Electric Utilities' Projected Deliveries, Consumption, and Stocks of Coal for Electricity Generation, 1984-1985, (1000 Short Tons)

	July	August	September	October	November	December	January	February	March	April	May	June	Total
Allegheny Power System													
Deliveries	1,549	1,888	1,616	50	50	1,843	1,366	1,366	1,351	1,348	1,348	1,313	15,087
Consumption	1,259	1,344	1,150	1,273	1,278	1,420	1,416	1,255	1,304	1,274	1,206	1,185	15,366
Stocks	3,928	4,472	4,937	3,714	2,486	2,908	2,858	2,969	3,016	3,090	3,232	3,360	
American Electric Power													
Deliveries	3,679	4,418	3,816	2,244	2,177	2,790	3,901	3,872	3,870	3,790	3,805	3,506	41,868
Consumption	3,354	3,456	3,123	2,881	3,033	3,577	3,946	3,705	3,912	3,362	33,380	3,487	71,216
Stocks	11,413	12,375	13,068	12,431	11,575	10,788	10,743	10,910	10,868	11,296	11,763	11,782	
Buckeye Power Inc.													
Deliveries	168	225	200	148	116	119	155	152	153	153	155	135	1,879
Consumption	108	147	166	143	167	171	174	118	131	170	172	126	1,793
Stocks	414	492	526	531	480	428	409	443	465	448	431	440	
Cincinnati Gas & Electric													
Deliveries	609	641	791	80	80	60	600	600	700	700	700	650	6,111
Consumption	537	570	525	483	476	573	588	520	587	515	462	559	6,395
Stocks	1,320	1,391	1,658	1,255	859	346	358	438	551	736	974	1,065	
Cleveland Electric Illuminating													
Deliveries	665	746	597	232	199	478	519	424	437	403	491	504	5,695
Consumption	494	585	547	533	449	478	519	424	437	386	424	434	5,710
Stocks	1,471	1,632	1,632	1,381	1,131	1,131	1,131	1,131	1,131	1,148	1,215	1,285	
Dayton Power and Light													
Deliveries	646	635	511	360	364	383	779	733	631	580	665	637	6,924
Consumption	632	621	496	572	641	661	763	711	613	556	642	615	7,522
Stocks	1,256	1,271	1,285	1,073	797	520	537	559	577	601	623	645	
Ohio Edison													
Deliveries	1,056	1,036	961	855	852	951	1,099	896	893	855	870	903	11,227
Consumption	967	996	895	992	1,009	1,111	1,145	954	927	930	910	979	11,816
Stocks	2,723	2,763	2,829	2,692	2,535	2,375	2,329	2,270	2,236	2,160	2,120	2,044	
Ohio Valley Electric Corp.													
Deliveries	685	687	640	351	382	396	572	524	574	546	590	595	6,542
Consumption	620	622	575	556	587	601	572	524	574	546	590	595	6,962
Stocks	1,715	1,780	1,845	1,640	1,435	1,230	1,230	1,230	1,230	1,230	1,230	1,230	
Toledo Edison													
Deliveries	154	190	195	162	89	194	188	183	171	149	143	154	1,972
Consumption	139	164	215	240	199	171	188	183	171	149	143	154	2,116
Stocks	413	438	418	340	230	252	320	320	320	320	320	320	

NOTE: NUMBERS MAY NOT SUM TO TOTAL DUE TO INDEPENDENT ROUNDING

Source: ODOE Form SE-3A.

Table 7-B. Ohio Electric Utilities' Projected Deliveries, Consumption, and Stocks of Oil for Electricity Consumption, 1984-1985 (1000 Bbls.)

	July	August	September	October	November	December	January	February	March	April	May	June	Total
Allegheny Power System													
Deliveries	0	0	0	0	0	0	0	0	0	0	0	0	0
Consumption	0	0	0	0	0	0	0	0	0	0	0	0	0
Stocks	167	167	167	167	167	167	167	167	167	167	167	167	
American Electric Power System													
Deliveries	43	41	56	46	44	49	47	42	43	36	43	47	537
Consumption	43	41	56	46	44	49	47	42	43	36	43	47	537
Stocks	267	267	267	267	267	267	267	267	267	267	267	267	
Buckeye Power System													
Deliveries	2	2	2	2	2	2	2	2	2	2	2	2	19
Consumption	2	2	2	2	2	2	2	2	2	2	2	2	19
Stocks	11	11	11	11	11	11	11	11	11	11	11	11	
Cincinnati Gas and Electric													
Deliveries	8	16	8	16	16	16	8	16	16	8	8	8	144
Consumption	12	13	8	16	10	14	9	10	17	11	7	14	140
Stocks	71	74	74	74	80	82	81	87	86	84	85	79	
Cleveland Electric Illuminating													
Deliveries	9	33	21	6	27	15	6	5	7	9	20	2	158
Consumption	9	33	21	6	27	15	6	5	7	9	20	2	158
Stocks	182	182	182	182	182	182	182	182	182	182	182	182	
Dayton Power and Light													
Deliveries	1	1	34	1	1	1	0	0	67	0	0	0	106
Consumption	8	5	6	6	9	10	18	17	11	7	4	6	106
Stocks	386	382	410	405	397	388	370	354	410	403	399	393	
Ohio Edison													
Deliveries	1	1	1	2	2	3	1	2	1	0	1	0	16
Consumption	1	1	1	2	2	3	1	2	1	0	1	0	16
Stocks	39	39	39	39	39	39	39	39	39	39	39	39	
Ohio Valley Electric Corp.													
Deliveries	2	2	2	2	2	2	2	2	2	2	2	2	20
Consumption	2	2	2	2	2	2	2	2	2	2	2	2	20
Stocks	6	6	6	6	6	6	6	6	6	6	6	6	
Toledo Edison													
Deliveries	125	123	123	141	116	132	260	227	176	206	182	163	1,974
Consumption	125	123	125	142	116	136	260	227	176	206	182	163	1,981
Stocks	528	527	526	525	525	520	510	510	510	510	510	510	

Source: ODOE Form SE-3A.

TABLE 7-C Electric Utilities' Demand Forecast Fuel Assessment, and Inventory Model (July 1984 - June 1985)

ALLEGHENY POWER SYSTEM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	2609.4	2692.3	2509.8	2664.9	2694.1	2990.8	3347.7	2873.7	2905.3	2595.7	2644.9	2621.6	33150.2
EST DEMAND GEN BY COAL	2609.4	2692.3	2509.8	2664.9	2694.1	2990.8	3347.7	2873.7	2905.3	2595.7	2644.9	2621.6	33150.2
PROJ DAILY CONSUMPTION COAL (KTONS)	38.72	39.95	38.48	39.54	41.31	44.38	49.68	45.58	43.11	39.80	39.25	40.20	
COAL DELIVERIES (KTONS)	1548.7	1888.1	1616.0	50.0	50.0	1842.8	1365.7	1365.7	1350.7	1348.2	1348.2	1313.2	15087.1
END OF MONTH STOCK COAL (KTONS)	3987.	4636.	5098.	3922.	2733.	3200.	3025.	3069.	3083.	3237.	3369.	3476.	
NUMBER OF DAYS SUPPLY COAL	101.	114.	117.	87.	58.	68.	69.	75.	78.	81.	84.	86.	

AMERICAN ELECTRIC POWER SYSTEM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	7089.0	7287.0	6678.0	6930.0	7230.0	7958.0	8741.0	7982.0	7816.0	6917.0	6788.0	6893.0	88308.9
EST DEMAND GEN BY COAL	7089.0	7287.0	6678.0	6930.0	7230.0	7958.0	8741.0	7982.0	7816.0	6917.0	6788.0	6893.0	88308.9
PROJ DAILY CONSUMPTION COAL (KTONS)	106.56	109.54	103.73	104.17	112.31	119.63	131.40	128.26	117.49	107.44	102.04	107.07	
COAL DELIVERIES (KTONS)	3679.0	4418.0	3816.0	2244.0	2177.0	2790.0	3901.0	3872.0	3870.0	3790.0	3805.0	3506.0	41868.0
END OF MONTH STOCK COAL (KTONS)	11464.	12486.	13190.	12204.	11012.	10094.	9922.	10074.	10302.	10868.	11510.	11804.	
NUMBER OF DAYS SUPPLY COAL	107.	114.	114.	100.	87.	80.	84.	92.	98.	103.	108.	110.	

TABLE 7-C Electric Utilities' Demand Forecast Fuel Assessment, and Inventory Model
(July 1984 - June 1985)

CINCINNATI GAS & ELECTRIC

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	1450.9	1475.5	1236.2	1183.9	1235.5	1380.4	1464.6	1312.3	1337.8	1154.0	1251.5	1392.4	15874.
EST DEMAND GEN BY COAL	1450.9	1475.5	1236.2	1183.9	1235.5	1380.4	1464.6	1312.3	1337.8	1154.0	1251.5	1392.4	15874.
PROJ DAILY CONSUMPTION COAL (KTONS)	18.67	18.99	16.44	15.24	16.43	17.77	18.85	18.06	17.22	15.35	16.11	18.52	
COAL DELIVERIES (KTONS)	608.9	641.2	791.4	80.0	80.0	60.0	600.0	600.0	700.0	700.0	700.0	650.0	6211.
END OF MONTH STOCK COAL (KTONS)	1278.	1331.	1629.	1236.	823.	333.	348.	425.	591.	830.	1031.	1126.	
NUMBER OF DAYS SUPPLY COAL	74.	83.	98.	71.	45.	18.	19.	25.	38.	49.	56.	61.	

CLEVELAND ELECTRIC ILLUMINATING COMPANY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	1613.0	1625.0	1497.0	1535.0	1496.0	1598.0	1722.0	1516.0	1632.0	1481.0	1544.0	1537.0	18796.
EST DEMAND GEN BY COAL	1613.0	1625.0	1497.0	1535.0	1496.0	1598.0	1722.0	1516.0	1632.0	1481.0	1544.0	1537.0	18796.
PROJ DAILY CONSUMPTION COAL (KTONS)	15.61	15.73	14.97	14.85	14.96	15.46	16.66	15.68	15.79	14.81	14.94	15.37	
COAL DELIVERIES (KTONS)	664.9	746.2	596.8	232.3	198.7	477.5	519.4	423.9	436.9	403.2	491.1	503.9	5694.
END OF MONTH STOCK COAL (KTONS)	1481.	1740.	1888.	1660.	1409.	1408.	1410.	1379.	1327.	1286.	1314.	1356.	
NUMBER OF DAYS SUPPLY COAL	98.	116.	122.	106.	88.	88.	91.	91.	88.	85.	85.	88.	

TABLE 7-C Electric Utilities' Demand Forecast Fuel Assessment, and Inventory Model
(July 1984 - June 1985)

DAYTON POWER & LIGHT

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	981.3	953.3	869.2	914.0	914.0	1028.3	1160.6	1031.6	1031.6	893.5	893.5	920.6	11591.
EST DEMAND GEN BY COAL	981.3	953.3	869.2	914.0	914.0	1028.3	1160.6	1031.6	1031.6	893.5	893.5	920.6	11591.
PROJ DAILY CONSUMPTION COAL (KTONS)	14.49	14.08	13.26	13.50	13.95	15.19	17.14	16.29	15.23	13.64	13.20	14.05	
COAL DELIVERIES (KTONS)	646.0	635.0	511.0	360.0	364.0	383.0	779.0	733.0	631.0	580.0	665.0	637.0	6924.
END OF MONTH STOCK COAL (KTONS)	1439.	1637.	1750.	1692.	1638.	1550.	1797.	2058.	2217.	2388.	2644.	2859.	
NUMBER OF DAYS SUPPLY COAL	105.	118.	118.	109.	102.	96.	123.	147.	161.	172.	188.	204.	

OHIO EDISON SYSTEM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	2085.2	2138.7	1859.3	2002.3	1943.5	2104.0	2264.9	2054.6	2092.3	1879.5	1869.9	1935.9	24230.
EST DEMAND GEN BY COAL	2085.2	2138.7	1859.3	2002.3	1943.5	2104.0	2264.9	2054.6	2092.3	1879.5	1869.9	1935.9	24230.
PROJ DAILY CONSUMPTION COAL (KTONS)	32.83	33.67	30.24	31.52	31.61	33.12	35.65	34.57	32.94	30.57	29.44	31.49	
COAL DELIVERIES (KTONS)	1056.3	1036.5	960.6	855.2	852.2	951.0	1099.0	895.7	892.9	854.7	870.0	903.4	11227.
END OF MONTH STOCK COAL (KTONS)	2672.	2664.	2718.	2596.	2500.	2424.	2418.	2311.	2182.	2120.	2077.	2036.	
NUMBER OF DAYS SUPPLY COAL	84.	86.	85.	78.	73.	70.	73.	74.	72.	69.	66.	65.	

TABLE 7-C Electric Utilities' Demand Forecast Fuel Assessment, and Inventory Model (July 1984 - June 1985)

OHIO VALLEY ELECTRIC CORPORATION

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	1419.9	1419.9	1319.1	1304.7	1395.0	1429.8	1369.6	1248.7	1375.0	1299.4	1387.3	1390.9	16359.3
EST DEMAND GEN BY COAL	1419.9	1419.9	1319.1	1304.7	1395.0	1429.8	1369.6	1248.7	1375.0	1299.4	1387.3	1390.9	16359.3
PROJ DAILY CONSUMPTION COAL (KTONS)	19.24	19.24	18.47	17.68	19.53	19.37	18.56	18.08	18.63	18.19	18.80	19.47	
COAL DELIVERIES (KTONS)	685.0	687.0	640.0	351.0	382.0	396.0	572.0	524.0	574.0	546.0	590.0	595.0	6542.0
END OF MONTH STOCK COAL (KTONS)	1739.	1829.	1915.	1718.	1514.	1310.	1307.	1306.	1303.	1303.	1310.	1321.	
NUMBER OF DAYS SUPPLY COAL	94.	98	102.	90.	81.	71.	71.	71.	70.	68.	67.	68.	

TOLEDO EDISON

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	674.6	706.6	604.7	648.6	626.2	666.1	771.5	734.2	724.7	637.3	615.9	641.6	8052.
EST DEMAND GEN BY COAL	383.2	452.9	604.7	648.6	530.4	427.6	532.3	518.3	485.5	406.0	376.9	413.2	5779.
EST DEMAND GEN BY NUC	291.4	253.7	0.0	0.0	95.8	238.5	239.2	215.9	239.2	231.3	239.0	228.4	2272.
PROJ DAILY CONSUMPTION COAL (KTONS)	4.52	5.35	7.38	7.66	6.47	5.05	6.28	6.54	5.73	4.95	4.45	5.04	
COAL DELIVERIES (KTONS)	154.0	190.0	195.0	162.0	89.0	194.0	188.0	183.0	171.0	149.0	143.0	154.0	1972.
END OF MONTH STOCK COAL (KTONS)	427.	451.	425.	349.	244.	282.	275.	268.	261.	262.	267.	270.	
NUMBER OF DAYS SUPPLY COAL	66.	60.	60.	61.	45.	44.	44.	49.	55.	56.	53.	53.	

III. NATURAL GAS

Natural gas distribution companies operating in Ohio are classified into two categories with respect to their reporting requirements. Eight major companies, Cincinnati Gas and Electric, Columbia Gas of Ohio, Dayton Power and Light, East Ohio Gas, National Gas and Oil, Ohio Gas, River Gas, and West Ohio Gas, report to ODOE every month. Eighteen small utilities and two municipal utilities report twice a year. This section is based upon the most recent reports of these utilities.

Distribution and Supplies

Distribution: Service shares of the gas distribution companies operating in Ohio are presented in Table 8 for the annual period May 1983 to April 1984. During this period, the four large distribution companies--Cincinnati Gas and Electric, Columbia Gas of Ohio, Dayton Power and Light, and East Ohio Gas--jointly distributed 93.55 percent of the reported natural gas requirements of the state. The four intermediate-sized companies--National Gas and Oil, Ohio Gas, River Gas, and West Ohio Gas--distributed an additional 4.76 percent. The remaining 1.69 percent of the reported natural gas requirements were distributed by 18 small utilities and two municipal utilities. The figures presented in Table 8 do not include self-help natural gas, which is gas directly procured by industrial customers for their own use. Total requirements of 874,135 MMCF reported in Table 8 represent an increase of approximately 20 percent in the distribution of natural gas compared to the same period last year. The magnitude of the increase is explained primarily by the economic recovery in the second half of 1983, and the very mild 1982-83 heating season which was responsible for an unusually low consumption level in the base period of comparison. The behavior of monthly sectoral requirements between May 1983 and April 1984 versus the preceding annual period are comparatively presented in figures 7-A through 7-D.

Sources of Supply: The major sources of natural gas supplies to the state of Ohio are presented in Table 9, and the quantities supplied are shown graphically in Figure 6. From May 1983 through April 1984, the eight major gas distribution companies of Ohio, which together account for 98.31 percent of the reported natural gas distribution in the state, procured 793,313 MMCF of natural gas to meet Ohio's requirements. This represents a 9.7 percent increase in the supplies of natural gas to Ohio compared to the same period in the previous twelve months.

Of the 793,313 MMCF total procurement, interstate gas purchases and synthetic natural gas (SNG) comprise 92.42 percent (See Table 9). Purchases of Ohio gas comprise the remaining 7.58 percent of the total. The 60,162 MMCF of Ohio production of natural gas purchased by the eight major gas utilities from May 1983 to April 1984 represents a 2.9 percent increase in their purchases of Ohio's product during the preceding annual period. This amount corresponds to approximately 39.8 percent of the state's total production of 151,300 MMCF in calendar year 1983.

Domestic interstate gas is the major source of supply for Ohio. Columbia Gas Transmission Corporation and Consolidated Gas Supply Corporation provided 67.42 percent of the natural gas supplied to the eight major Ohio gas distribution companies from May 1983 through April 1984.

Historical Behavior of Interstate Natural Gas Supplies: Until 1978, wellhead prices paid by interstate transmission companies to natural gas producers were under federal control. Starting in the early seventies, and especially after the OPEC oil price increase of 1973, the federally-regulated interstate gas prices lagged behind the unregulated prices which the product commanded at the wellhead. Consequently, there were supply shortages in the interstate natural gas markets during the heating season.

In Ohio, which is more than 90% dependent on interstate gas, a ban was imposed upon new customer hook-ups in 1972 which remained in effect until 1978. Similarly, base allocations of lower priority industrial and commercial customers were curtailed between 1973 and 1978.

The Natural Gas Policy Act (NGPA), which became effective in 1978, deregulated some gas prices immediately, and legislated a phased decontrol of prices for many categories of natural gas by 1985. Pursuant to the passage of the NGPA, relatively unfettered increases in interstate gas prices have stimulated new and costlier gas production from deep wells, thus increasing available supplies. The same price increase have also choked off sectoral requirements. There have been no curtailments in Ohio since 1978, and none are expected in the foreseeable future.

Historical Behavior of Sectoral Gas Requirements

Annual Sectoral Requirements: Long-term trends in annual sectoral natural gas prices and sectoral natural gas requirements for Ohio are presented in Figures B-5 thru B-8. It is clear from these figures that the dynamic behavior of natural gas markets in Ohio have been characterized by increasing price trends and declining requirement trends since the early seventies.

Between 1970 and 1983, in response to a series of worldwide price shocks, including the OPEC oil price increases of 1973 and 1978, the price of natural gas in Ohio increased over eightfold in the residential and commercial sectors, and over ninefold in the industrial sector (See Table 10). These price increases far exceed the increase in the rate of inflation (See Table 11), or the rate of increase of the gross state product. Such significant and sustained increases in sectoral prices have induced significant and sustained conservation efforts among sectoral customers, which in turn have been translated into declining sectoral requirement trends.

It should be noted, however, that the declining trends in industrial sector requirements represent not only the net outcomes of price induced energy conservation and fuel switching programs, but also a permanent loss in industrial capacity, especially in the older and more energy intensive manufacturing industries of the state's economy.

Monthly Sectoral Requirements: The monthly time series behavior of residential, commercial, industrial, and total natural gas requirements in Ohio from January 1974 through April 1984, along with the Division's independent forecasts for May 1985 through June 1985 are displayed in figures B-1 through B-4. The seasonal variations in residential and commercial requirements can easily be discerned from these figures. Natural gas is the primary source of space heating in Ohio. Demand peaks in all sectors during the heating season and falls off during the cooling season. The dramatic effects of the curtailments imposed on the industrial sector during the 1976-77 heating season is clearly discernable in figure B-4.

Utility Forecasts: Consolidated Results and Twelve Month Outlook

Consolidated Results: Aggregate supply and demand projections of the eight major utilities, as presented in Table 12 and Figure 8, indicate a 0.01 percent annual surplus of natural gas supplies over requirements. All eight utilities project supply to be in excess of, or equal to, requirements during the 1984-85 heating season. Supply and demand projections of the individual utilities, as submitted in their "Monthly Reports of Supply and Demand of Natural Gas," are summarized in Appendix B, Table B-9.

Table 13 shows the actual aggregate monthly sectoral requirements for the eight major utilities from May 1983 through April 1984, along with the utilities' consolidated projections for the May 1984 through April 1985 period. The forecast shows decreases in demand in all sectors. Figure 9 is a graphic representation of the utilities' consolidated sectoral projections for the forecast period. Overall, the forecast total annual gas requirement shows an decrease of 8.2 percent relative to the same twelve month period last year.

Actual and forecast aggregate supply of natural gas by source is displayed in Table 14. Delivered product from all pipeline sources is expected to decrease 8.2 percent over the previous twelve month period. The majority of this supply, roughly 91 percent, will continue to come from out-of-state sources. Columbia Gas Transmission Corporation by far the largest supplier to the state, is projected to supply 43.0 percent of natural gas demand.

Twelve Month Outlook: On the basis of the utilities' natural gas supply and sectoral requirement projections, the outlook for the next twelve months indicates no supply shortages, under both normal and 10 percent colder than normal weather conditions, in Ohio.

The Ohio Division of Energy will be monitoring developments in the supplies and requirements of natural gas throughout the rest of the year and will take appropriate action if a critical situation develops. However, Ohio Division of Energy's current conclusion is that prevailing conditions portend no shortages or curtailments of natural gas during the 1984-85 heating season.

Ohio Division of Energy Independent Forecast

Methodology

The independent natural gas demand forecasts prepared by Ohio Division of Energy for the eight major gas utilities serving Ohio are based upon time series analyses of sectoral requirements for each individual month of the year, between January 1970 and April 1984, adjusted for long-term annual trends, severe climatic conditions, and the business cycle.

Time series models, with adjustments, yield projections that possess better statistical properties, and are at least as accurate as alternative short-term forecasting techniques. They also offer the added flexibility of being able to produce updated forecasts which reflect and incorporate specific assumptions pertaining to the prevailing climatic and economic conditions every time the most recent actual monthly requirements are reported to Ohio Division of Energy. The utilization of an adjusted time series methodology is designed to provide a double check, thus reducing forecasting error for a more accurate and decisive diagnosis of energy requirements of the state.

Special Assumptions

We expect the relatively strong economic recovery experienced by the state to continue through out the forecasting horizon, with the unemployment rate remaining between 8.5 to 9.5 percent. Although this would ordinarily tend to increase industrial requirements, the Division of Energy anticipates that increasing natural gas prices, as the final phase of NGPA goes into effect on January 1, 1985, shall keep industrial requirements at or slightly below current levels.

Results

The results obtained on the basis of ODOE's independent forecast of sectoral requirements and the utilities forecasts of supplies are presented in Tables 15 and 17-20, for the 1984-85 heating season. Summary results presented in Table 15 indicate a potential deficiency of 11.3 percent in the case of a 10 percent colder than normal winter. Given the availability of interstate gas supplies and the current storage capacities of Ohio utilities, no actual deficiencies or curtailments are expected.

The deficiencies indicated in Tables 15 and 17-20 arise, in the first place, from the low supply projections made by Ohio utilities. Clearly, such low projections do not reflect anticipated natural gas supply shortages in the next 12 months. Rather, they reflect anticipated substantial declines in sectoral requirements in response to anticipated substantial increases in sectoral natural gas prices, as the final phase of NGPA price decontrols go into effect on January 1, 1985. The differences between the Division's forecast of sectoral requirements and the utilities forecasts of sectoral requirements seem to arise, therefore, from different assumptions pertaining to the magnitudes of the anticipated price increases during the forecasting horizon.

ODOE's independent forecasts for the four major utilities are compared with each company's forecast for the period from July 1984 through June 1985 in Appendix B, Tables B-1 through B-4. The Division's forecasts of sectoral end-use gas requirements for Ohio are presented in Appendix B, Tables B-5 through B-8. These have been adjusted for the long-term historical trends observed in sectoral natural gas requirements in the State. Finally, for comparison, Appendix B, Table B-9 displays twelve month forecasts produced monthly by each utility and reported to the Ohio Division of Energy.

Outlook

Any unexpected changes in the short-term behavior of residential and commercial requirements would mainly be associated with variations in the severity of the heating season, and alterations in the long-term trends followed by natural gas prices. Given conservation efforts and increasing supplies of natural gas, dramatic changes in the long-term trends followed by residential and commercial natural gas requirements and prices are not anticipated in the near future.

In recent years, the industrial sales of natural gas by utilities have decreased substantially. Part of this has been due to conservation, fuel switching and declining industrial activity in the basic industries. An increasing portion of this decline has also been the result of self-help programs administered by the PUCO and fuel oil displacement programs administered by the Federal Energy Reliability Commission (FERC).

The self-help program began as a response to natural gas curtailment in the 1970's. As discussed on pages 34 and 35, the utilities were unable to supply all of their customers' needs due to federal regulations on the price that interstate transmission companies could pay producers. Large industries were able to pay unregulated prices to producers and then contract with transmission and distribution conmpanies for delivery. The utilities charged a fee for transmission and could receive up to 25% of the gas for their other customers. With the dramatic rise in prices, industry and commercial firms again find it expedient to use self-help gas. The surfeit of natural gas in recent years makes it unnecessary for the utilities to take possession of natural gas. Therefore, the Public Utilities Commission of Ohio has recently moved to amend the self-help rules so that utilities may transmit self-help gas for a fee but do not aquire ownership of a fraction of it.

A second program which as resulted in a loss of industrial and commercial tariff customers for the utilities is the fuel oil displacement program. If a customer seriously threatens to switch to No. 6 fuel oil, FERC may allow the utility to sell gas at a lower price to this customer.

A further factor in future tariff sales is that bills are now pending in Congress which would allow utilities to act like common carriers transporting gas that they do not own, for a fee.

The Division expects a substantial amount of non-tarriff consumption for the next few years until natural gas is completely deregulated and the long-term take-or-pay contracts have expired.

Finally, rapid increases in gas prices, coupled with stabilized oil prices, are bringing oil into the picture as a competitively priced fuel. Many industrial and large commercial firms are developing dual fuel capability (oil and gas) in order to respond to possible unforeseen effects of the price fluctuations. However, many small industrial and commercial firms, as well as residential customers, will not have fuel-switching capability. This will no doubt increase conservation efforts as gas prices continue to escalate.

Emergency Response Capability Profile

There have been no natural gas curtailments in Ohio since 1978, and neither Ohio gas utilities nor the gas pipeline companies project any curtailments through April 1985. However, in the event of a shortage, it is anticipated that fuel-switching capability of industrial and large commercial users would be accelerated. Detailed emergency plans that describe strategies to respond to fuel supply shortfalls are on file at the Ohio Division of Energy.

Table 8: Total Natural Gas Requirements of All Commercial Utilities in Ohio, May 1983 through April 1984

	(1) Sales to All End Use	(2) Storage (In)	Total Requirement (1+2)	Percent of Total Ohio Requirement
Cincinnati Gas and Electric Co.	77612	0	77612	8.88
Columbia Gas of Ohio	262158	0	262158	29.99
Dayton Power and Light Co.	54572	0	54572	6.24
East Ohio Gas Co.	358920	64503	423423	48.44
National Gas and Oil Co.	15631	1192	16823	1.93
Ohio Gas Co.	7222	336	7558	0.87
River Gas Co.	4401	0	4401	0.50
West Ohio Gas Co.	12797	0	12797	1.46
Total Eight Major Utilities	793313	66031	859344	98.31
Total Small Utilities	8023	0	8023	0.92
Municipal Utilities	6768	0	6768	0.77
TOTAL ALL UTILITIES	808104	66031	874135	100.00

Source: ODOE Form SG-2 and SG-4.

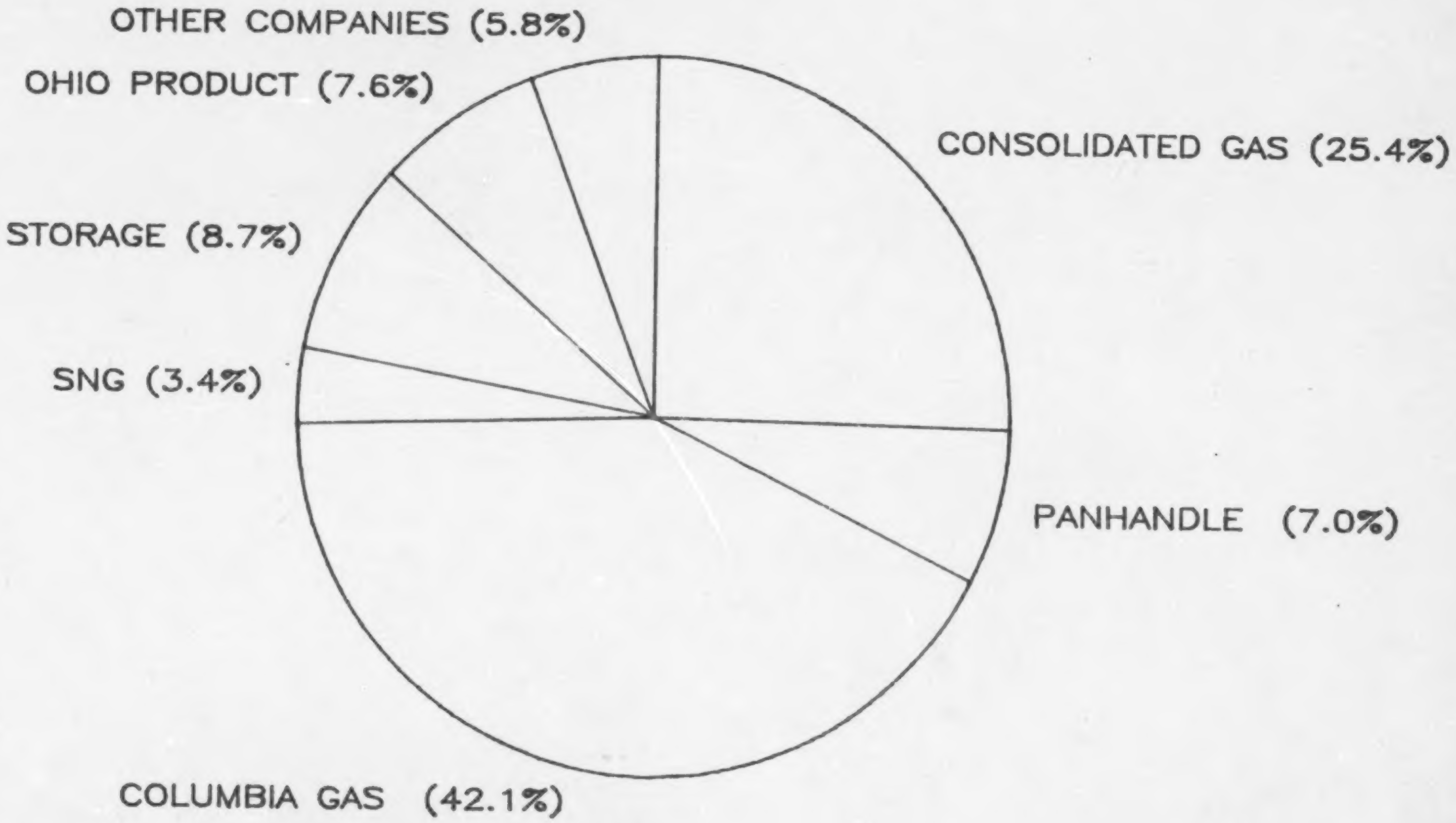
Table 9: Sources of Natural Gas Supplies to the Eight Major Gas Utilities, May 1983 through April 1984

	Supply	Percent of Total	Rank
Columbia Gas Transmission Corp.	333696	42.06	1
Consolidated Gas Supply Corp.	201204	25.36	2
Lawrenceburg Gas	32710	4.12	6
Michigan/Wisconsin Pipeline Co.	1140	0.14	11
Panhandle Eastern Pipeline Co.	55932	7.05	5
Tennessee Gas Pipeline Co.	1591	0.20	10
Texas Eastern Transmission Corp.	7922	1.00	8
Texas Gas Transmission Corp.	283	0.04	12
Green Springs (SNG) (Columbia LNG)	26736	3.37	7
Storage/Propane[1]	68972	8.69	3
Other	2965	0.37	9
Total SNG and Out-of-State	733151	92.42	
Ohio Product	60162	7.58	4
TOTAL	793313	100.00	

Note: [1] Gas in storage represents a source during the period under consideration. Figure is elevated because Cincinnati Gas and Electric maintains propane in storage for peak-sharing.

Source: Ohio Division of Energy Form SG-2

FIG. 6. SOURCES OF NATURAL GAS SUPPLY FOR THE EIGHT MAJOR GAS UTILITIES (MAY 1983 - APRIL 1984)



SOURCE: OHIO DIVISION OF ENERGY

Table 10: Ohio Natural Gas Prices in Current
Dollars, 1970-1983
($ Per MMBtu)

Year	Residential	Commercial	Industrial
1970	0.84	0.73	0.52
1971	0.96	0.81	0.56
1972	1.02	0.86	0.62
1973	1.08	0.94	0.65
1974	1.23	1.07	0.85
1975	1.51	1.35	1.12
1976	1.79	1.63	1.43
1977	2.23	2.07	1.95
1978	2.43	2.24	2.05
1979	2.78	2.57	2.32
1980	3.45	3.23	2.97
1981	3.87	3.61	3.34
1982	4.80	4.53	4.20
1983	5.88	5.40	5.01

Source: American Gas Association, *Gas Facts*, and the Ohio Division of Energy.

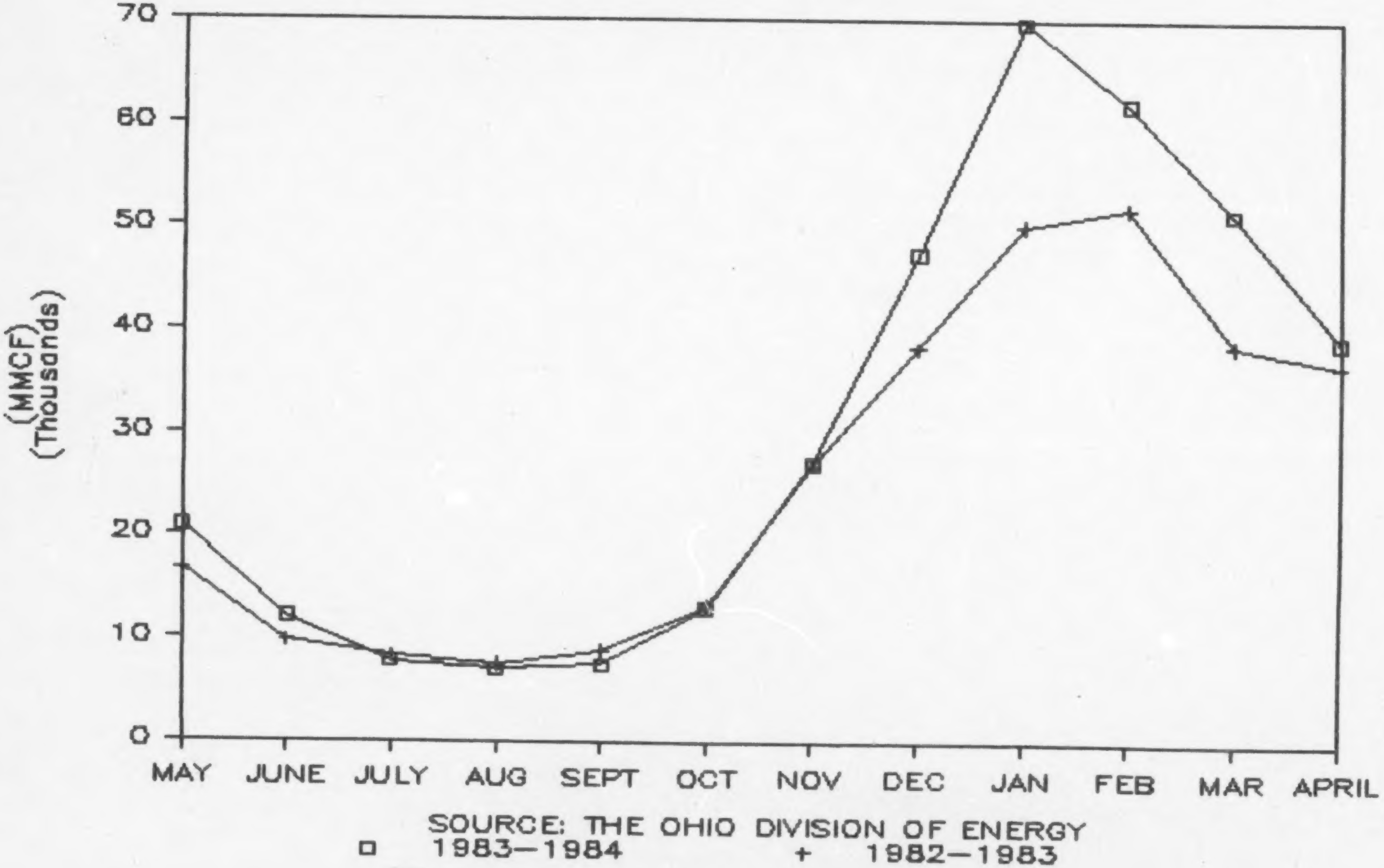
Table 11: Ohio Natural Gas Prices in Constant Dollars, 1970-1983
($ Per MMBtu)

Year	Residential	Commercial	Industrial
1970	0.72	0.63	0.45
1971	0.78	0.67	0.47
1972	0.81	0.69	0.49
1973	0.81	0.71	0.46
1974	0.83	0.72	0.58
1975	0.94	0.84	0.69
1976	1.05	0.96	0.84
1977	1.23	1.14	1.07
1978	1.24	1.15	1.05
1979	1.28	1.18	1.07
1980	1.40	1.31	1.20
1981	1.42	1.34	1.25
1982	1.66	1.57	1.45
1983	1.84	1.69	1.57

Note: All prices are stated in terms of 1967 dollars.

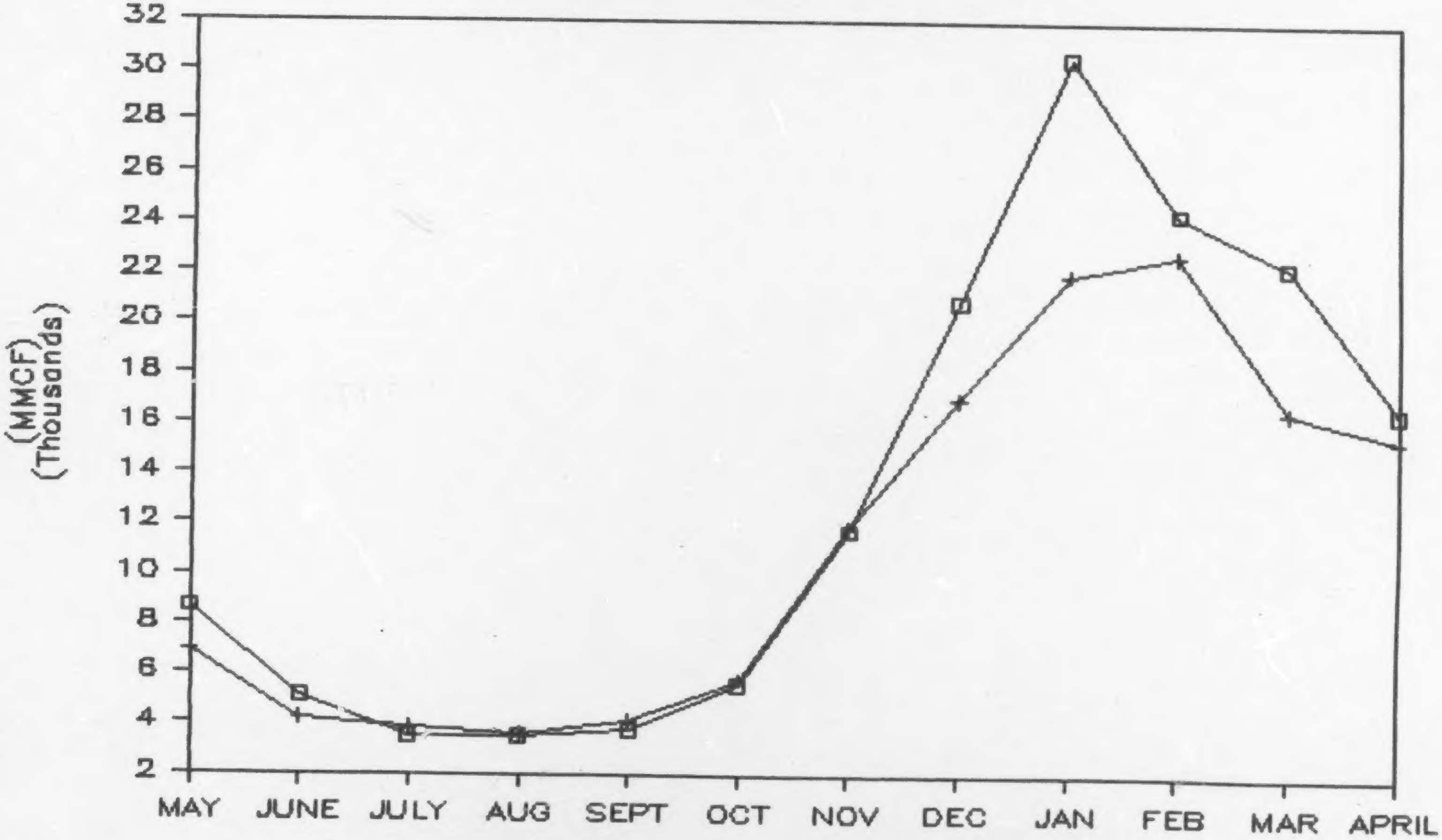
Source: American Gas Association,Gas Facts, 1982, U.S. Department of Commerce, "Survey of Current Business", April 1982, and the Ohio Division of Energy.

FIG. 7A. OHIO RESIDENTIAL SECTOR NATURAL GAS CONSUMPTION
1982 - 1983 VS. 1983 - 1984



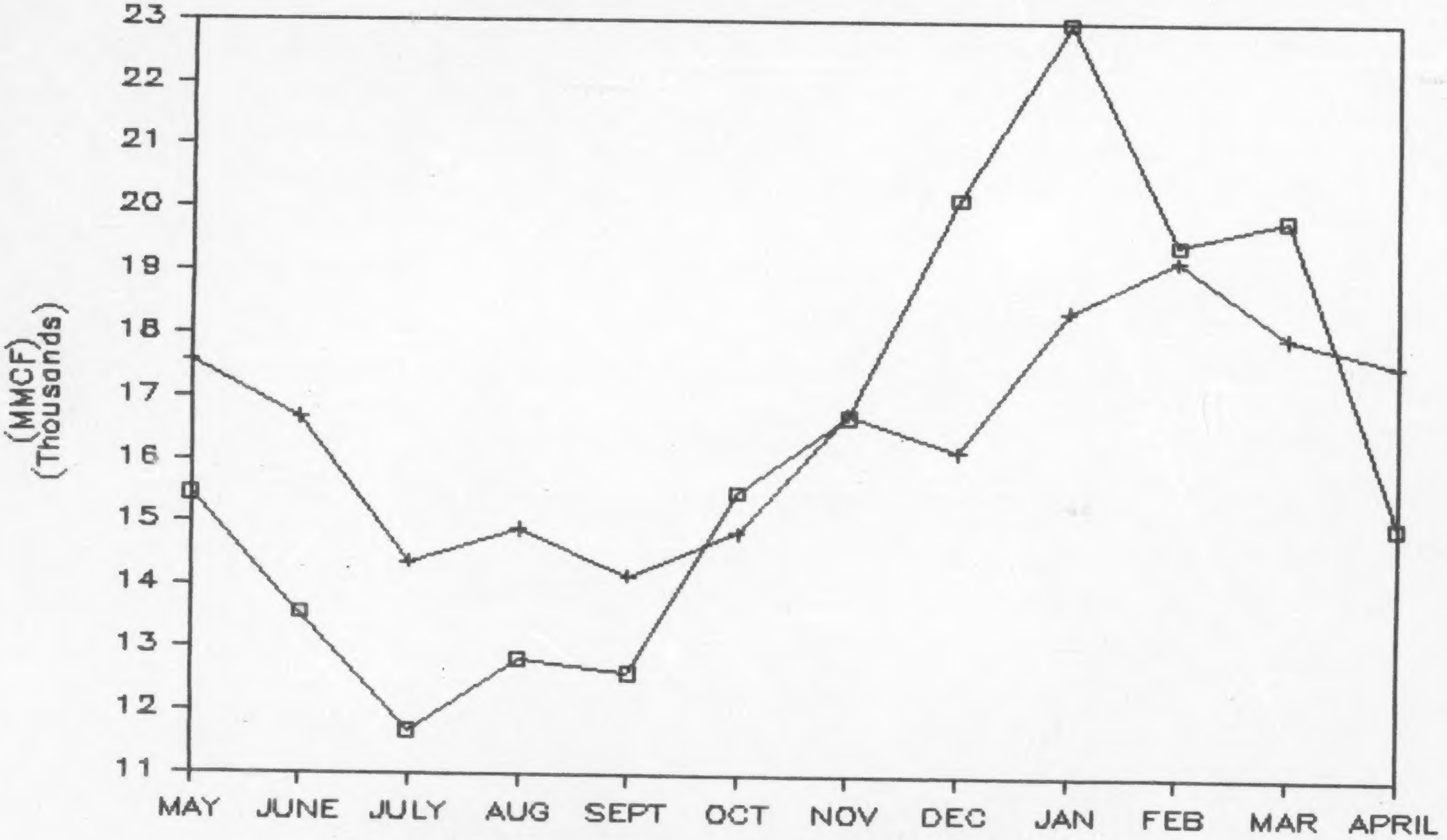
SOURCE: THE OHIO DIVISION OF ENERGY

FIG. 7B. OHIO COMMERCIAL SECTOR NATURAL GAS CONSUMPTION
1982 - 1983 VS. 1983 - 1984



SOURCE: THE OHIO DIVISION OF ENERGY

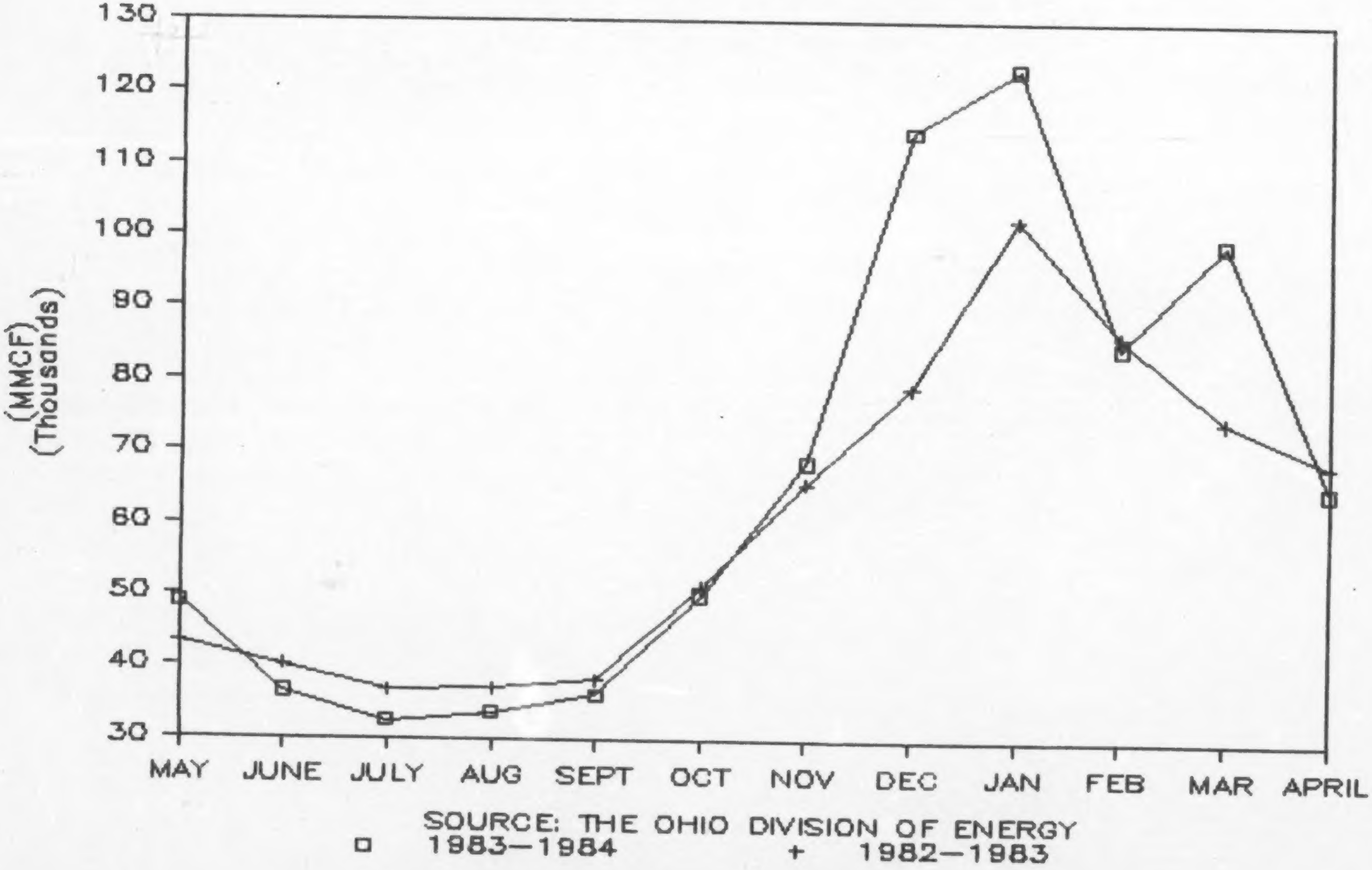
FIG. 7C. OHIO INDUSTRIAL SECTOR NATURAL GAS CONSUMPTION
1982 - 1983 VS. 1983 - 1984



SOURCE: THE OHIO DIVISION OF ENERGY

□ 1983—1984 + 1982—1983

FIG. 7D. TOTAL OHIO NATURAL GAS CONSUMPTION
1982 - 1983 VS. 1983 - 1984



SOURCE: THE OHIO DIVISION OF ENERGY

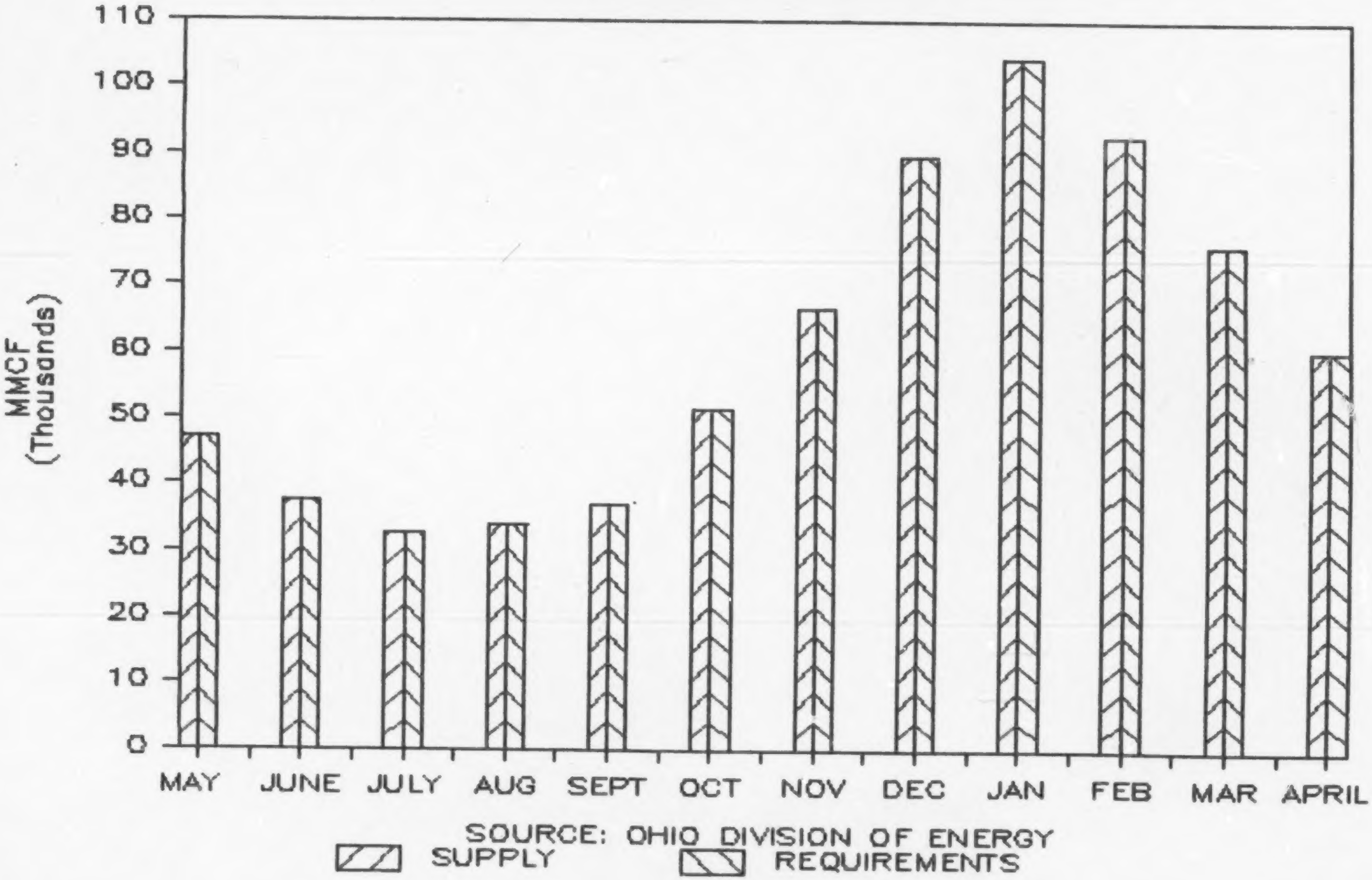
Table 12. Projected Aggregate Supply and Requirements for Natural Gas for Eight Major Utilities
May 1984 - April 1985
(MMCF)

	Supply	Demand	Deficiency	Percent Deficiency
MAY	46971	46971	0	0
JUNE	37538	37538	0	0
JULY	32521	32521	0	0
AUGUST	33817	33817	0	0
SEPTEMBER	36884	36884	0	0
OCTOBER	51163	51163	0	0
NOVEMBER	66438	66438	0	0
DECEMBER	89699	89680	-19	-0.02
JANUARY	104356	104338	-18	-0.02
FEBRUARY	92443	92421	-22	-0.02
MARCH	75910	75892	-18	-0.02
APRIL	60217	60210	-7	-0.01
TOTALS				
SUMMER	299111	299104	-7	.00
WINTER	428846	428769	-77	-0.02
ANNUAL	727957	727873	-84	-0.01

NOTE: A positive deficiency indicates a shortage;
A negative deficiency indicates a surplus.

SOURCE: ODOE FORM SG-1 and the OHIO DIVISION OF ENERGY

FIG 8. PROJECTED SUPPLY AND REQUIREMENTS OF NATURAL GAS BY SECTOR, TOTAL OF EIGHT MAJOR COMPANIES (MAY 1984 - APRIL 1985)



SOURCE: OHIO DIVISION OF ENERGY

Table 13. Comparison Between One Year of Actual and Forecast Demand for Eight Major Ohio Utilities by Sector

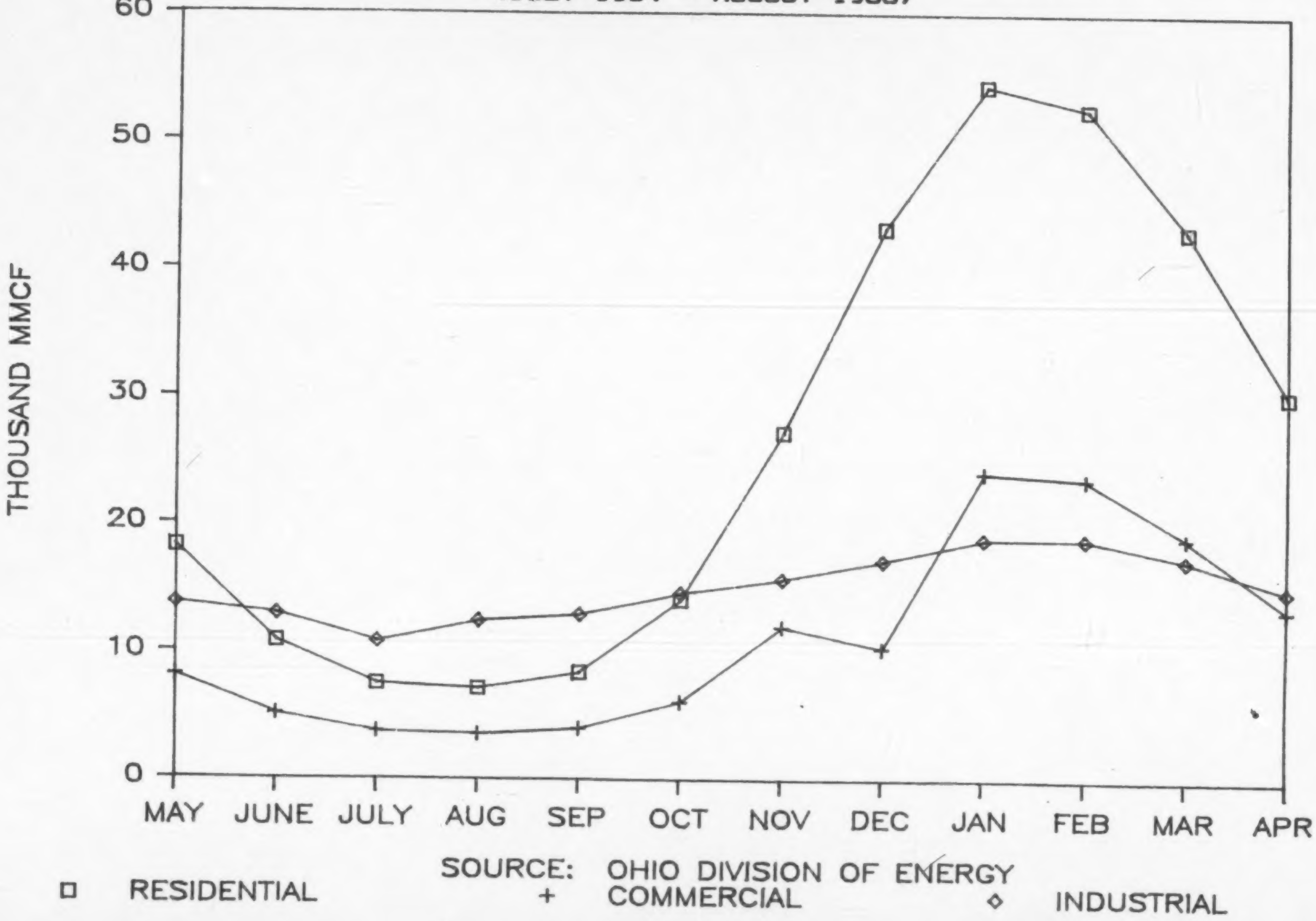
MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
5/84	202	18224	8086	13845	-3701	10517	46971	0
5/83	196	20915	8661	15449	-6187	10136	48974	0
	3.1%	-12.9%	-6.6%	-10.4%	40.2%	3.8%	-4.1%	0.0%
6/84	30	10800	5053	12896	-1326	10115	37538	0
6/83	29	12054	5094	13553	-4014	9806	36493	0
	3.4%	-10.4%	-0.8%	-4.8%	67.0%	3.2%	2.9%	0.0%
7/84	5	7533	3654	10847	654	9833	32521	0
7/83	5	7789	3508	11678	-89	9526	32412	0
	0.0%	-3.3%	4.2%	-7.1%	834.8%	3.2%	0.3%	0.0%
8/84	11	7144	3472	12378	1851	8972	33817	0
8/83	11	7005	3481	12812	1153	9210	33661	0
	0.0%	2.0%	-0.3%	-3.4%	60.5%	-2.6%	0.5%	0.0%
9/84	87	8356	3957	12943	2958	8670	36884	0
9/83	87	7402	3767	12607	3348	8956	36080	0
	0.0%	12.9%	5.0%	2.7%	-11.6%	-3.2%	2.2%	0.0%
10/84	334	14085	6148	14568	9371	6991	51163	0
10/83	334	12896	5582	15503	9083	6933	49997	0
	0.0%	9.2%	10.1%	-6.0%	3.2%	0.8%	2.3%	0.0%
11/84	690	27185	12041	15659	11553	0	66438	0
11/83	686	26978	11725	16695	11266	2003	68668	0
	0.6%	0.8%	2.7%	-6.2%	2.5%	-100.0%	-3.2%	0.0%
12/84	1052	43221	19299	17155	10005	0	89680	-19
12/83	1028	47401	20872	20184	26128	0	114585	0
	2.3%	-8.8%	-7.5%	-15.0%	-61.7%	0.0%	-21.7%	999.9%
1/85	1141	54362	24050	18854	5746	1326	104338	-18
1/84	1124	69695	30538	22979	337	0	123549	0
	1.5%	-22.0%	-21.2%	-18.0%	1605.0%	999.9%	-15.5%	999.9%
2/85	980	52473	23573	18885	-3836	1326	92421	-22
2/84	977	61863	24405	19460	-21481	509	84756	0
	0.3%	-15.2%	-3.4%	-3.0%	82.1%	160.5%	9.0%	999.9%
3/85	823	43003	19043	17252	-3406	0	75892	-18
3/84	814	51212	22273	19863	5731	2	99081	0
	1.1%	-16.0%	-14.5%	-13.1%	-159.4%	-100.0%	-23.4%	999.9%
4/85	735	30174	13413	14876	-6236	7983	60210	-7
4/84	455	38993	16504	15009	-14399	8950	65057	0
	61.5%	-22.6%	-18.7%	-0.9%	56.7%	-10.8%	-7.5%	999.9%
SUMMER TOTAL								
	1404	96316	43783	92353	3571	63081	299104	-7
	1117	107054	46597	96611	-11105	63517	302674	0
	25.7%	-10.0%	-6.0%	-4.4%	132.2%	-0.7%	-1.2%	999.9%
WINTER TOTAL								
	4686	220244	98006	87805	20062	2652	428769	-77
	4629	257149	109813	99181	21981	2514	490639	0
	1.2%	-14.4%	-10.8%	-11.5%	-8.7%	5.5%	-12.6%	999.9%
YEAR TOTAL								
	6090	316560	141789	180158	23633	65733	727873	-84
	5746	364203	156410	195792	10876	66031	793313	0
	6.0%	-13.1%	-9.3%	-8.0%	117.3%	-0.5%	-8.2%	999.9%

-NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

FIG. 9. PROJECTED REQUREMENTS OF NATURAL GAS BY SECTOR
EIGHT MAJOR COMPANIES
(JULY 1984 - AUGUST 1985)



SOURCE: OHIO DIVISION OF ENERGY

Table 14. Comparison Between One Year of Actual and Forecast Supply for Eight Major Ohio Gas Utilities by Source (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID- ATED GAS	LAWREN- CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
5/84	18597	17010	573	54	4516	110	630	13	0	5178	0	230	60	46971
5/83	18166	17562	657	118	4523	119	605	11	0	4871	1745	421	176	48974
	2.4%	-3.1%	-12.8%	-54.2%	-0.2%	-7.6%	4.1%	18.2%	0.0%	6.3%	-100.0%	-45.4%	-65.9%	-4.1%
6/84	13931	11896	1059	48	4467	110	610	9	0	5239	0	165	4	37538
6/83	11940	12040	663	87	4409	104	605	7	0	5238	1376	321	-297	36493
	16.7%	-1.2%	59.7%	-44.8%	1.3%	5.8%	0.8%	28.6%	0.0%	0.0%	-100.0%	-48.6%	101.3%	2.9%
7/84	9567	9941	1107	37	4619	110	630	8	0	5354	0	170	73	32521
7/83	9516	10257	1003	52	4529	106	625	6	0	4937	1225	164	-8	32412
	0.5%	-3.1%	10.4%	-28.8%	2.0%	3.8%	0.8%	33.3%	0.0%	8.4%	-100.0%	3.7%	1012.5%	0.3%
8/84	8836	10791	2039	38	4439	110	620	6	0	5756	0	165	112	33817
8/83	9582	10822	1153	61	4371	108	638	6	0	5418	1246	145	111	33661
	-7.8%	-0.3%	76.8%	-37.7%	1.6%	1.9%	-2.8%	0.0%	0.0%	6.2%	-100.0%	13.8%	0.9%	0.5%
9/84	11285	13007	2055	147	4296	110	600	8	0	5240	1	165	-30	36884
9/83	9404	12605	1956	76	4255	122	730	8	0	5200	1344	145	235	36080
	20.0%	3.2%	5.1%	93.4%	1.0%	-9.8%	-17.8%	0.0%	0.0%	0.8%	-99.9%	13.8%	-112.8%	2.2%
10/84	18768	18808	2364	94	4698	135	620	13	0	5290	0	170	203	51163
10/83	17358	16890	2710	88	4569	136	799	13	0	5069	1845	189	331	49997
	8.1%	11.4%	-12.8%	6.8%	2.8%	-0.7%	-22.4%	0.0%	0.0%	4.4%	-100.0%	-10.1%	-38.7%	2.3%
11/84	31468	8349	2755	104	4697	126	610	30	0	5385	1243	11365	306	66438
11/83	28186	14077	3787	89	4612	128	694	27	0	5303	2727	8648	390	68668
	11.6%	-40.7%	-27.3%	16.9%	1.8%	-1.6%	-12.1%	11.1%	0.0%	1.5%	-54.4%	31.4%	-21.5%	-3.2%
12/84	44803	14448	2884	121	5054	150	620	46	0	5360	1111	14705	397	89699
12/83	55412	19918	3881	125	5335	149	669	53	0	5321	3583	19846	293	114585
	-19.1%	-27.5%	-25.7%	-3.2%	-5.3%	0.7%	-7.3%	-13.2%	0.0%	0.7%	-69.0%	-25.9%	35.5%	-21.7%
1/85	53077	17301	3014	104	5073	150	630	49	0	5301	1111	18028	379	104356
1/84	61160	24434	4672	130	5404	160	671	55	0	4780	3829	18033	221	123549
	-13.2%	-29.2%	-35.5%	-20.0%	-6.1%	-6.3%	-6.1%	-10.9%	0.0%	10.9%	-71.0%	-0.0%	71.5%	-15.5%
2/85	46694	19672	2988	158	4576	140	570	41	0	5260	1004	10959	381	92443
2/84	39995	17184	4138	104	4620	148	557	35	0	4487	3605	9587	296	84756
	16.7%	14.5%	-27.8%	51.9%	-1.0%	-5.4%	2.3%	17.1%	0.0%	17.2%	-72.1%	14.3%	28.7%	9.1%
3/85	35591	15947	3364	276	4844	150	630	35	0	5233	1132	8719	-11	75910
3/84	47165	22163	4683	115	4900	160	649	41	0	4788	2946	10941	530	99081
	-24.5%	-28.0%	-28.2%	140.0%	-1.1%	-6.3%	-2.9%	-14.6%	0.0%	9.3%	-61.6%	-20.3%	-102.1%	-23.4%
4/85	23659	21513	2706	259	4464	150	610	21	0	5307	1006	535	-13	60217
4/84	25812	23252	3407	95	4405	151	680	21	0	4750	1265	532	687	65057
	-8.3%	-7.5%	-20.6%	172.6%	1.3%	-0.7%	-10.3%	0.0%	0.0%	11.7%	-20.5%	0.6%	-101.9%	-7.4%
SUMMER TOTAL	104643	102966	11903	677	31499	835	4320	78	0	37364	1007	1600	409	299111
	101778	103428	11549	577	31061	846	4682	72	0	35483	10046	1917	1235	302674
	2.8%	-0.4%	3.1%	17.3%	1.4%	-1.3%	-7.7%	8.3%	0.0%	5.3%	-90.0%	-16.5%	-66.9%	-1.2%
WINTER TOTAL	211633	75717	15005	763	24244	716	3060	201	0	26539	5601	63776	1452	428846
	231918	97776	21161	563	24871	745	3240	211	0	24679	16690	67055	1730	490639
	-8.7%	-22.6%	-29.1%	35.5%	-2.5%	-3.9%	-5.6%	-4.7%	0.0%	7.5%	-66.4%	-4.9%	-16.1%	-12.6%
YEAR TOTAL	316276	178683	26908	1440	55743	1551	7380	279	0	63903	6608	65376	1861	727957
	333696	201204	32710	1140	55932	1591	7922	283	0	6J162	26736	68972	2965	793313
	-5.2%	-11.2%	-17.7%	26.3%	-0.3%	-2.5%	-6.8%	-1.4%	0.0%	6.2%	-75.3%	-5.2%	-37.2%	-8.2%

-NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table 15: Independent Forecasts of Gas Supply and Demand for the Eight Major Ohio Gas Utilities
November 1984 - March 1985
(MMCF)

	Normal Weather			10% Colder Than Normal Weather		
	Supply	Demand	Surplus[1] (Deficiency)	Supply	Demand	Surplus[1] (Deficiency)
Cincinnati Gas & Electric	50436	53100	(2664)	53949	54990	(1041)
Columbia Gas	147478	178000	(30522)	156956	186443	(29487)
Dayton Power & Light	34777	37400	(2623)	37254	39148	(1894)
East Ohio Gas	174597	203200	(28603)	184841	211940	(27099)
National Gas	6788	4862	1926	6788	5030	1758
Ohio Gas	4207	4207	0	4522	4522	0
River Gas	2528	2528	0	2667	2667	0
West Ohio Gas	7590	7590	0	8178	8178	0
Total	428401	490887	(62486)	455155	512918	(57763)

[1] Note: Numbers within parentheses indicate deficiency. Columbia Gas of Ohio and East Ohio Gas estimate that there is over 145,853 MMCF in storage to meet any deficiencies in Ohio. East Ohio Gas Company indicated that their useable storage capacity of 143,307 MMCF represents 23% of Consolidated's useable storage capacity.

Source: June 1984 ODOE Form SG-2 of reporting utilities, and the Ohio Division of Energy.

Table 16: Independent Forecast of Annual Natural Gas End Use Requirements, Calendar Year 1984
(TBTU)

	Actual 1983	Lower 95% Confidence Limit	Forecast 1985	Upper 95% Confidence Limit	Forecast % Change
Residential	319.4	294.9	310.4	325.9	-2.82
Commercial	139.4	124.5	131.0	137.6	-6.03
Industrial	191.7	161.5	170.0	178.5	-11.32
Other*	38.0	46.7	49.2	51.6	29.47
Total	688.5	627.6	660.6	693.6	-4.05

Source: Ohio Division of Energy

*Other includes transportation and electric utilities sectors.

**Industrial forecast is based on the assumption that average unemployment will be down to 7%.

Table 17: Independent Forecasts of Gas Supply and Demand for Cincinnati Gas and Electric Company
November 1984 - March 1985
(MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus[3] (Deficiency)
November 1984	7685	648	7300	385	8205	713	7581	624
December 1984	11264	947	12100	(836)	12041	1042	12511	(470)
January 1985	12188	1119	14200	(2012)	13087	1231	14686	(1599)
February 1985	10679	921	9500	1179	11419	1013	9900	1519
March 1984	8620	719	10000	(1380)	9197	791	10312	(1115)
Total	50436		53100	(2664)	53949		54990	(1041)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met with gas in storage.

Source: Cincinnati Gas & Electric's June ODOE Form SG-2, and the Ohio Division of Energy.

Table 18: Independent Forecasts of Gas Supply and Demand for Columbia Gas of Ohio
November 1984 - March 1985
(MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus (Deficiency)[3]
November 1984	23379	589	25000	(1621)	24462	648	26044	(1582)
December 1984	30704	930	38500	(7796)	32498	1023	40146	(7648)
January 1985	36374	1192	46700	(10326)	38794	1311	48806	(10012)
February 1985	31412	1146	34500	(3088)	33785	1261	36536	(2751)
March 1984	25609	908	33300	(7691)	27417	999	34911	(7494)
Total	147478		178000	(30522)	156956		186443	(29487)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met with gas in storage.

Source: Columbia Gas of Ohio's June 1984 ODOE Form SG-2, and the Ohio Division of Energy.

Table 19: Independent Forecasts of Gas Supply and Demand for Dayton Power & Light Company
November 1984 - March 1985
(MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus (Deficiency)[3]
November 1984	4770	487	5100	(330)	5011	536	5286	(275)
December 1984	7068	896	7500	(432)	7671	986	7841	(170)
January 1985	8570	1161	10300	(1730)	9146	1277	10742	(1596)
February 1985	8526	1152	8000	526	9104	1267	8439	665
March 1984	5843	891	6500	(657)	6322	980	6839	(517)
Total	34777		37400	(2623)	37254		39148	(1894)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met with gas in storage.

Source: Dayton Power & Light Company's June ODOE Form SG-2, and the Ohio Division of Energy

Table 20: Independent Forecasts of Gas Supply and Demand for East Ohio Gas Company
November 1984 - March 1985
(MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus[3] (Deficiency)
November 1984	26950	567	31000	(4050)	28408	624	32020	(3612)
December 1984	36229	956	44900	(8671)	38453	1052	46620	(8167)
January 1985	42181	1213	52100	(9919)	44776	1334	54282	(9506)
February 1985	37259	1176	37400	(141)	39424	1294	39516	(92)
March 1984	31978	946	37800	(5822)	33780	1041	39502	(5722)
Total	174597		203200	(28603)	184841		211940	(27099)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met with gas in storage.

Source: East Ohio Gas Company's June 1983 ODOE Form SG-2, and the Ohio Division of Energy

APPENDIX A: ELECTRICITY

Table A-1: Allegheny Power System Forecast of Electric Energy Demand (1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	2,592	2,609	0.66	2,785	7.45
August	2,726	2,692	-1.25	2,852	4.62
September	2,471	2,510	1.58	2,668	7.97
October	2,560	2,665	4.10	2,785	8.79
November	2,653	2,694	1.55	2,829	6.63
December	3,090	2,990	-3.24	3,144	1.75
January	3,204	3,348	4.49	3,332	4.00
February	2,802	2,874	2.57	2,977	6.25
March	3,051	2,905	-4.79	3,125	2.43
April	2,648	2,596	-1.96	2,793	5.48
May	2,667	2,645	-0.82	2,760	3.49
June	2,662	2,622	-1.50	2,752	3.38

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-2: American Electric Power Forecast of Electric Energy Demand (1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	7,053	7,089	0.51	7,600	7.76
August	7,376	7,287	-1.21	7,594	2.96
September	6,398	6,678	4.38	6,806	6.38
October	6,367	6,930	8.84	6,808	6.93
November	6,711	7,230	7.73	7,036	4.84
December	8,051	7,958	-1.16	7,939	-1.39
January	8,290	8,741	5.44	8,366	0.92
February	7,201	7,982	10.85	7,349	2.06
March	7,904	7,816	-1.11	7,868	-0.46
April	6,944	6,917	-0.39	6,920	-0.35
May	6,823	6,788	-0.51	6,755	-1.00
June		6,893		7,007	

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-3: Cincinnati Gas and Electric Forecast of Electric Energy Demand (1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	1,616	1,451	-10.21	1,629	0.80
August	1,667	1,475	-11.52	1,604	-3.78
September	1,324	1,236	-6.65	1,335	0.83
October	1,204	1,184	-1.66	1,256	4.32
November	1,258	1,235	-1.83	1,296	3.02
December	1,547	1,380	-10.80	1,494	-3.43
January	1,575	1,465	-6.98	1,573	-0.13
February	1,304	1,312	0.61	1,362	4.45
March	1,443	1,338	-7.28	1,414	-2.01
April	1,231	1,154	-6.26	1,262	2.52
May	1,232	1,251	1.54	1,290	4.71
June		1,392		1,389	

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-4: Cleveland Electric Illuminating Company
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	1,682	1,613	-4.10	1,700	1.07
August	1,797	1,625	-9.57	1,702	-5.29
September	1,587	1,497	-5.67	1,545	-2.65
October	1,466	1,535	4.71	1,527	4.16
November	1,399	1,496	6.93	1,515	8.29
December	1,617	1,598	-1.18	1,662	2.78
January	1,690	1,722	1.89	1,764	4.38
February	1,514	1,516	0.13	1,603	5.88
March	1,657	1,632	-1.51	1,696	2.35
April	1,450	1,481	2.14	1,529	5.45
May	1,495	1,544	3.28	1,517	1.47
June	1,564	1,537	-1.73	1,634	4.48

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-5: Dayton Power and Light Forecast of Electric Energy Demand (1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	1,023	981	-4.11	1,061	3.71
August	1,056	953	-9.75	1,050	-0.57
September	872	869	-0.34	893	2.41
October	843	914	8.42	870	3.20
November	882	914	3.63	913	3.51
December	1,099	1,028	-6.46	1,074	-2.27
January	1,121	1,161	3.57	1,141	1.78
February	922	1,032	11.93	943	2.28
March	1,033	1,032	-0.10	1,044	1.06
April	859	894	4.07	912	6.17
May	843	894	6.05	884	4.86
June		921		986	

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-6: Ohio Edison Company
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	2,101	2,085	-0.76	2,158	2.71
August	2,191	2,139	-2.37	2,179	-0.55
September	1,941	1,859	-4.22	2,011	3.61
October	1,932	2,002	3.62	2,051	6.16
November	1,968	1,943	-1.27	2,048	4.07
December	2,246	2,104	-6.32	2,207	-1.74
January	2,296	2,265	-1.35	2,326	1.31
February	2,028	2,055	1.33	2,098	3.45
March	2,247	2,092	-6.90	2,230	-0.76
April	1,954	1,879	-3.84	2,011	2.92
May	1,976	1,870	-5.36	2,011	1.77
June		1,936		2,059	

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-7: Ohio Valley Electric Corporation Forecast of Electric Energy Demand (1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual
July	1,162	1,420	22.20
August	1,299	1,420	9.31
September	1,127	1,320	17.13
October	1,239	1,305	5.33
November	1,311	1,395	6.41
December	1,477	1,430	-3.18
January	1,381	1,370	-0.80
February	1,181	1,249	5.76
March	1,403	1,375	-2.00
April	1,339	1,299	-2.99
May	1,380	1,387	0.51
June	1,389	1,391	0.14

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-8: Toledo Edison Company
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	676	675	-0.15	687	1.63
August	709	707	-0.28	696	-1.83
September	625	605	-3.20	632	1.12
October	606	649	7.10	640	5.61
November	638	626	-1.88	649	1.72
December	743	666	-10.36	709	-4.58
January	756	771	1.98	754	-0.26
February	644	734	13.98	665	3.26
March	724	725	0.14	708	-2.21
April	620	637	2.74	629	1.45
May	619	616	-0.48	629	1.62
June	658	642	-2.43	644	-2.13

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-9: Independent Forecast of Ohio Electricity Demand
Residential Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
July	2,152	2,563	2,973	2,603	-1.5
August	2,267	2,695	3,124	2,818	-4.4
September	1,955	2,402	2,848	2,604	-7.8
October	1,457	1,921	2,384	1,936	-0.8
November	1,625	2,104	2,584	2,178	-3.4
December	2,151	2,646	3,142	2,727	-3.0
January	2,777	3,288	3,798	3,492	-5.8
February	2,369	2,895	3,420	2,891	0.1
March	2,095	2,625	3,165	2,771	-5.3
April	1,859	2,413	2,967	2,448	-1.4
May	1,468	2,073	2,679	2,111	-1.8
June	1,377	2,030	2,683		

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

Table A-10: Independent Forecast of Ohio Electricity Demand
Commercial Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
July	1,927	2,082	2,238	2,047	1.7
August	1,957	2,117	2,277	2,125	-0.4
September	1,845	2,010	2,175	2,060	-2.4
October	1,555	1,724	1,893	1,716	0.5
November	1,498	1,671	1,844	1,678	-0.4
December	1,649	1,826	2,004	1,850	-1.3
January	1,823	2,004	2,186	2,048	-2.1
February	1,720	1,906	2,091	1,902	0.2
March	1,662	1,851	2,041	1,889	-2.0
April	1,552	1,745	1,939	1,711	2.0
May	1,477	1,687	1,897	1,702	-0.9
June	1,631	1,857	2,082		

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

Table A-11: Independent Forecast of Ohio Electricity Demand
Industrial Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
July	3,443	3,844	4,246	3,281	17.2
August	3,545	4,009	4,473	3,542	13.2
September	3,477	3,995	4,514	3,616	10.5
October	3,438	4,006	4,574	3,607	11.1
November	3,290	3,903	4,517	3,554	9.8
December	3,117	3,773	4,429	3,447	9.5
January	3,191	3,887	4,582	3,708	4.8
February	3,209	3,942	4,676	3,719	6.0
March	3,363	4,132	4,901	4,020	2.8
April	3,220	4,023	4,827	3,927	2.4
May	3,206	4,063	4,920	4,006	1.4
June	3,173	4,080	4,987		

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

Table A-12: Independent Forecast of Ohio Electricity Demand
All Sectors
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
July	8,036	8,840	9,644	8,341	6.0
August	8,257	9,185	10,113	8,923	2.9
September	7,848	8,886	9,924	8,712	2.0
October	7,120	8,256	9,393	7,698	7.2
November	7,087	8,315	9,542	7,854	5.9
December	7,615	8,928	10,240	8,705	2.6
January	8,371	9,763	11,155	9,745	0.2
February	7,897	9,365	10,832	8,937	4.8
March	7,705	9,244	10,783	9,105	1.5
April	7,078	8,686	10,293	8,467	2.6
May	6,656	8,386	10,109	8,192	2.4
June	6,706	8,544	10,381		

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

APPENDIX B: NATURAL GAS

Table B-1: Cincinnati Gas and Electric Forecast of Natural Gas Requirements (MMCF)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	2,525	2,478	-1.86	2,500	-0.99
August	2,396	2,498	4.26	2,700	12.69
September	2,651	2,743	3.47	3,000	13.16
October	4,136	4,064	-1.74	4,700	13.64
November	7,102	7,685	8.21	7,300	2.79
December	13,409	11,264	-16.00	12,100	-9.76
January	13,641	12,188	-10.65	14,200	4.10
February	8,984	10,679	18.87	9,500	5.74
March	10,506	8,620	-17.95	10,000	-4.82
April	5,693	5,832	2.44	6,000	5.39
May	3,599	3,908	8.59	3,900	8.36
June		2,770		2,800	

Source: ODOE Form SG-2. and the Ohio Division of Energy.

Table B-2: Columbia Gas of Ohio
Forecast of Natural Gas Requirements
(MMCF)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	8,127	6,830	-15.96	7,300	-10.18
August	8,490	7,358	-13.33	8,300	-2.24
September	8,999	8,316	-7.59	9,200	2.23
October	15,819	12,854	-18.74	16,100	1.78
November	23,973	23,379	-2.48	25,000	4.28
December	42,589	30,704	-27.91	38,500	-9.60
January	44,941	36,374	-19.06	46,700	3.91
February	30,376	31,412	3.41	34,500	13.58
March	36,170	25,609	-29.20	33,300	-7.93
April	19,292	17,435	-9.63	22,200	15.07
May	12,935	11,033	-14.70	13,200	2.05
June		7,141		8,500	

Source: SG-2. Forms of the reporting utility and the Ohio Division of Energy.

Table B-3: Dayton Power and Light Forecast of Natural Gas Requirements (MMCF)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	1,503	1,522	1.26	1,600	6.45
August	1,541	1,667	8.18	1,700	10.32
September	1,548	1,634	5.56	1,600	3.36
October	2,343	2,681	14.43	2,600	10.97
November	4,528	4,770	5.34	5,100	12.63
December	6,781	7,068	4.23	7,500	10.60
January	10,545	8,570	-18.73	10,300	-2.32
February	7,817	8,526	9.07	8,000	2.34
March	7,421	5,843	-21.26	6,500	-12.41
April	5,664	5,606	-1.02	5,700	0.64
May	3,051	2,325	-23.80	2,500	-18.06
June		1,504		1,900	

Source: SG-2. Forms of the reporting utility and the Ohio Division of Energy.

Table B-4: East Ohio Gas
Forecast of Natural Gas Requirements
(MMCF)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
July	18,340	19,209	4.74	17,500	-4.58
August	19,347	18,869	-2.47	18,500	-4.38
September	20,770	20,788	0.09	20,000	-3.71
October	25,035	26,601	6.26	26,000	3.85
November	29,703	26,950	-9.27	31,000	4.37
December	46,450	36,229	-22.00	44,900	-3.34
January	48,461	42,181	-12.96	52,100	7.51
February	33,272	37,259	11.98	37,400	12.41
March	40,129	31,978	-20.31	37,800	-5.80
April	31,092	29,370	-5.54	32,500	4.53
May	26,189	25,233	-3.65	23,500	-10.27
June		20,364		19,000	

Source: SG-2. Forms of the reporting utility and the Ohio Division of Energy.

Table B-5: Independent Forecast of Ohio Natural Gas End User Requirements: Residential Sector (MMCF)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
July	7,100	7,600	8,100	7,789	-2.4
August	6,200	7,200	8,200	7,005	2.8
September	6,700	7,600	8,500	7,402	2.7
October	10,000	13,000	16,000	12,896	0.8
November	22,000	27,000	32,000	26,978	0.1
December	39,800	45,000	50,200	47,401	-5.1
January	55,000	65,000	75,000	69,695	-6.7
February	51,000	57,000	63,000	61,863	-7.9
March	37,000	46,000	54,000	51,212	-10.2
April	31,500	36,500	41,500	38,993	-6.4
May	11,000	18,000	25,000	21,988	-18.1
June	7,800	9,800	11,800		

Source: ODOE Form SG-1 and the Ohio Division of Energy

Table B-6: Independent Forecast of Ohio Natural Gas End User Requirements: Commercial Sector (MMCF)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
July	3,200	3,600	4,000	3,508	2.6
August	3,000	3,400	3,800	3,481	-2.3
September	3,450	3,850	4,250	3,767	2.2
October	4,800	6,000	7,200	5,582	7.5
November	9,000	11,500	14,000	11,725	-1.9
December	16,000	19,000	22,000	20,872	-9.0
January	24,500	28,500	32,500	30,538	-6.7
February	19,000	23,000	27,000	24,405	-5.8
March	16,000	19,000	22,000	22,273	-14.7
April	12,400	16,400	20,400	16,504	-0.6
May	6,500	7,700	8,900	8,990	-14.3
June	4,200	4,800	5,400		

Source: ODOE Form SG-1 and the Ohio Division of Energy

Table B-7: Independent Forecast of Ohio Natural Gas End User Requirements: Industrial Sector (MMCF)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
July	5,000	9,000	13,000	11,678	-22.9
August	6,500	11,500	15,500	12,812	-10.2
September	8,000	11,000	14,000	12,607	-12.7
October	9,000	13,000	17,000	15,503	-16.1
November	11,500	16,500	21,500	16,695	-1.2
December	13,000	18,000	23,000	20,184	-10.8
January	17,000	23,000	29,000	22,979	0.1
February	10,000	18,000	26,000	19,460	-7.5
March	11,000	18,000	25,000	19,863	-9.4
April	9,000	15,000	21,000	15,009	-0.1
May	6,000	13,000	20,000	12,161	6.9
June	7,000	12,000	17,000		

Source: ODOE Form SG-1 and the Ohio Division of Energy

Table B-8: Independent Forecast of Ohio Natural Gas End User Requirements: All Sectors (MMCF)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
July	21,000	31,000	41,000	32,412	-4.4
August	28,000	34,000	40,000	33,661	1.0
September	31,000	37,000	43,000	36,080	2.5
October	33,100	54,600	76,100	49,997	9.2
November	55,000	65,000	75,000	68,668	-5.3
December	95,000	108,500	125,000	114,585	-5.3
January	101,000	120,000	141,000	123,549	-2.9
February	69,000	79,000	89,000	84,756	-6.8
March	78,000	84,000	100,000	99,081	-15.2
April	62,000	72,400	82,000	65,057	11.3
May	36,000	47,700	58,000	44,263	7.8
June	26,000	35,800	46,000		

Source: ODOE Form SG-1 and the Ohio Division of Energy

Table B-9. Projected Supply and Demand for Eight Major Ohio Natural Gas Utilities (MMCF)

COMPANY: CINN. GAS & ELEC.

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/84	6/84	7/84	8/84	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	SUMMER	WINTER	YEAR
SUPPLY	3820	2991	2783	2498	2743	4064	7685	11265	12187	10678	8621	5832	24731	50436	75167
DEMAND	3820	2991	2783	2498	2743	4064	7685	11265	12187	10678	8621	5832	24731	50436	75167
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: COLUMBIA GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/84	6/84	7/84	8/84	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	SUMMER	WINTER	YEAR
SUPPLY	12408	9933	7482	8175	9202	14392	23379	30704	36374	31412	25609	17435	79027	147478	226505
DEMAND	12408	9933	7482	8175	9202	14392	23379	30704	36374	31412	25609	17435	79027	147478	226505
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: DAYTON POWER & LIGHT

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/84	6/84	7/84	8/84	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	SUMMER	WINTER	YEAR
SUPPLY	2829	2064	1636	1766	1856	3099	4770	7068	8570	8526	5843	4608	17858	34777	52635
DEMAND	2829	2064	1636	1766	1856	3099	4770	7068	8570	8526	5843	4608	17858	34777	52635
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: EAST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/84	6/84	7/84	8/84	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	SUMMER	WINTER	YEAR
SUPPLY	25661	20506	18625	19449	21076	26924	27291	36550	42179	37260	31978	29370	161611	175258	336869
DEMAND	25661	20506	18625	19449	21076	26924	27291	36550	42179	37260	31978	29370	161611	175258	336869
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table B-9. Projected Supply and Demand for Eight Major Ohio Natural Gas Utilities (MMCF)

COMPANY: NATIONAL GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/84	6/84	7/84	8/84	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	SUMMER	WINTER	YEAR
SUPPLY	1160	1094	1070	1108	1090	1109	1136	1300	1569	1430	1329	1287	7918	6764	14682
DEMAND	1160	1094	1070	1108	1090	1109	1136	1281	1551	1408	1309	1280	7911	6685	14596
DEFICIENCY	0	0	0	0	0	0	0	-19	-18	-22	-20	-7	-7	-79	-86
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-1.5%	-1.2%	-1.6%	-1.5%	-0.5%	-0.1%	-1.2%	-0.6%

COMPANY: OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/84	6/84	7/84	8/84	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	SUMMER	WINTER	YEAR
SUPPLY	327	404	409	229	282	525	662	886	1025	890	736	497	2673	4199	6872
DEMAND	327	404	409	229	282	525	662	886	1025	890	736	497	2673	4199	6872
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: RIVER GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

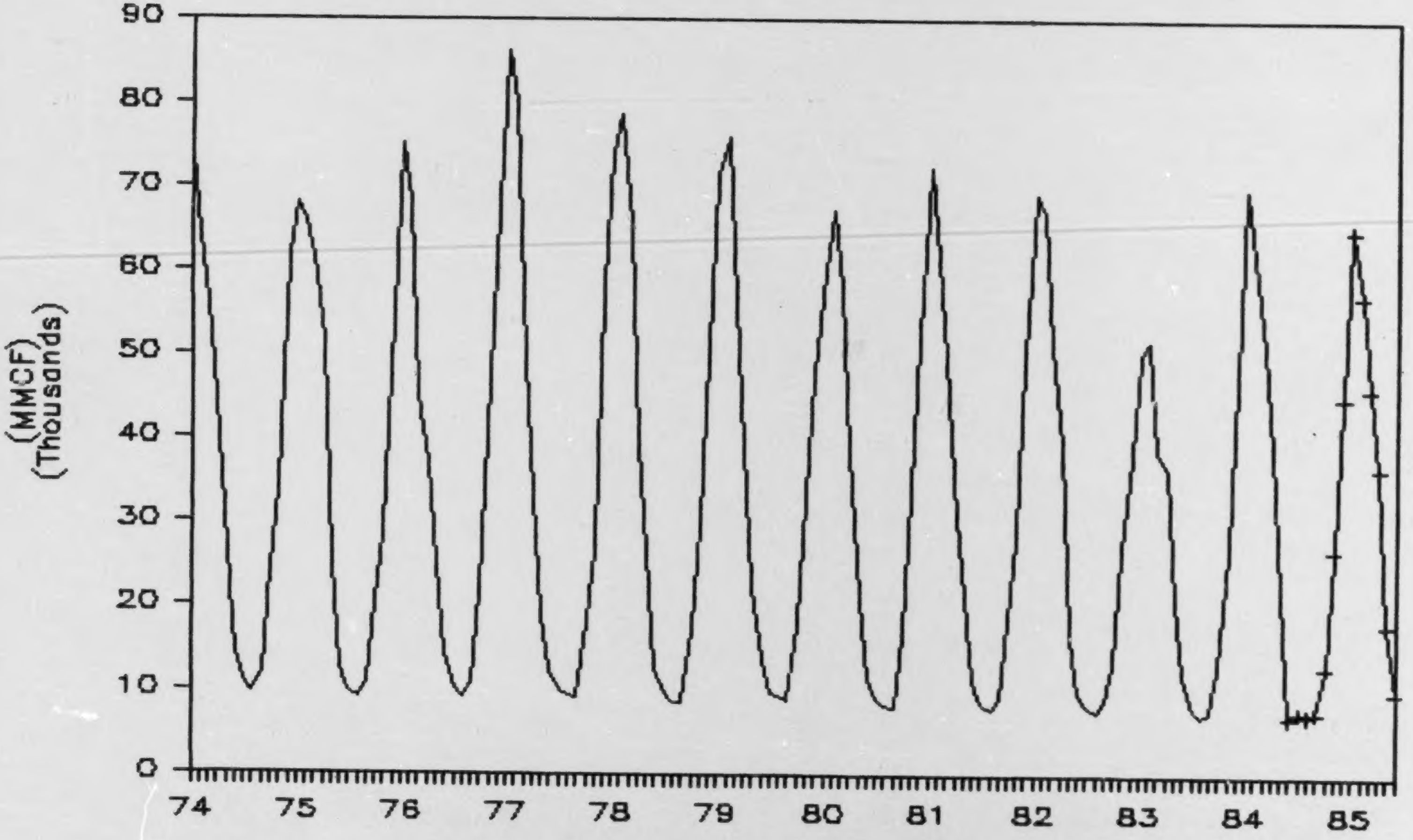
MONTH/YEAR	5/84	6/84	7/84	8/84	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	SUMMER	WINTER	YEAR
SUPPLY	206	146	192	200	175	274	385	533	624	553	433	308	1501	2528	4029
DEMAND	206	146	192	200	175	274	385	533	624	553	433	308	1501	2528	4029
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: WEST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/84	6/84	7/84	8/84	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	SUMMER	WINTER	YEAR
SUPPLY	560	400	324	392	460	776	1130	1393	1828	1694	1361	880	3792	7406	11198
DEMAND	560	400	324	392	460	776	1130	1393	1828	1694	1361	880	3792	7406	11198
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

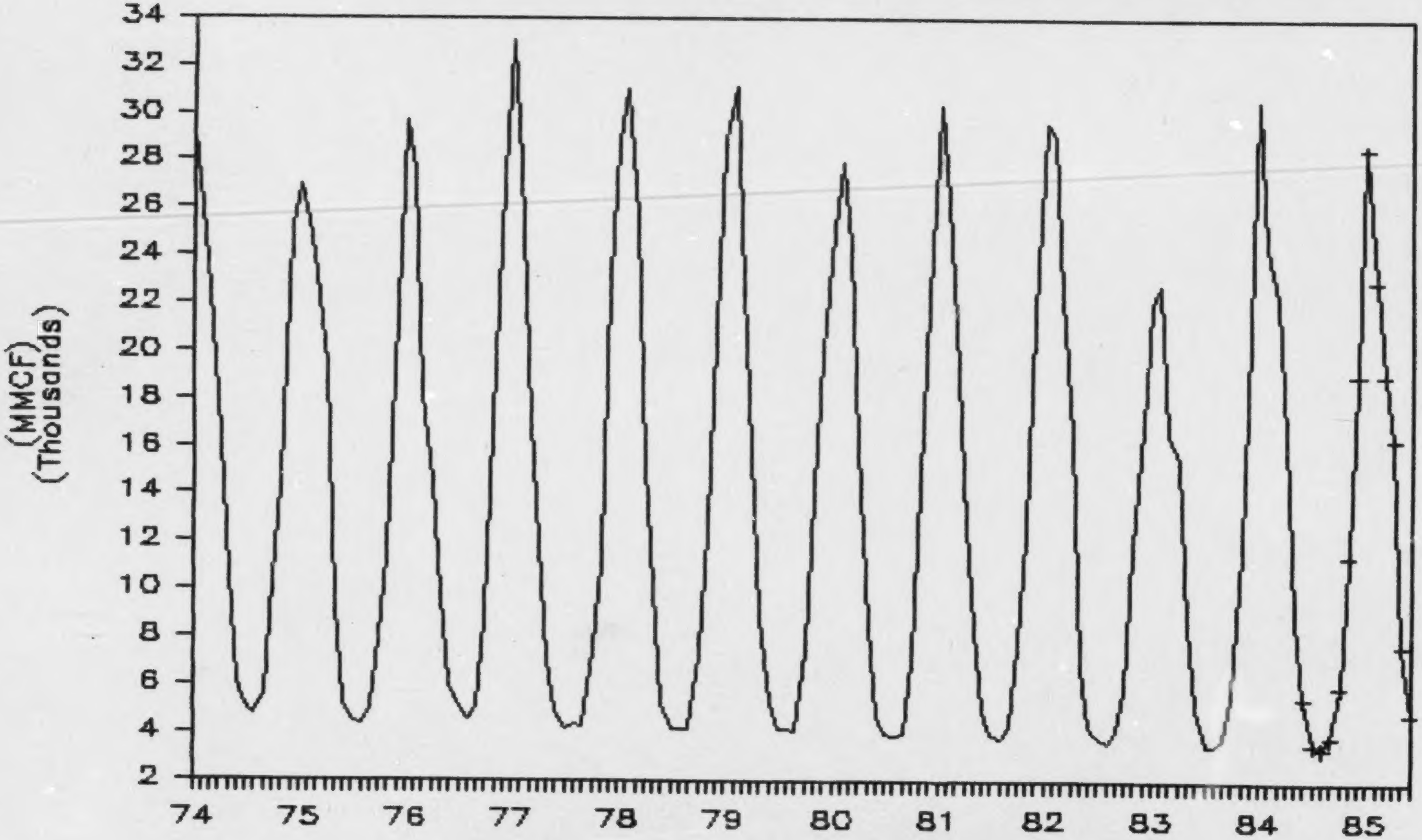
FIG. B-1. MONTHLY OHIO RESIDENTIAL NATURAL GAS CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1985)



SOURCE: THE OHIO DIVISION OF ENERGY

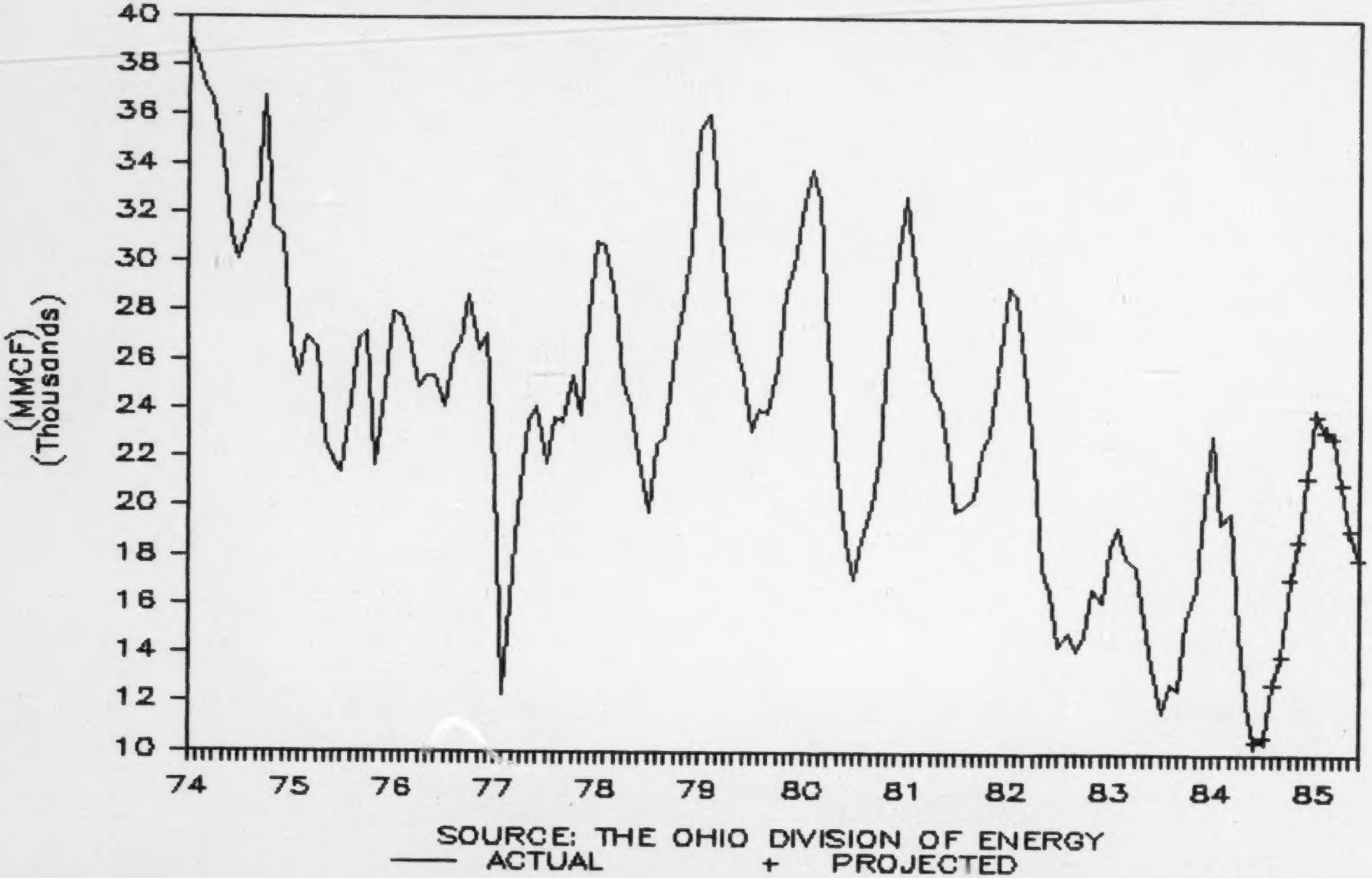
—— ACTUAL + PROJECTED

FIG. B-2. MONTHLY OHIO COMMERCIAL NATURAL GAS CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1985)



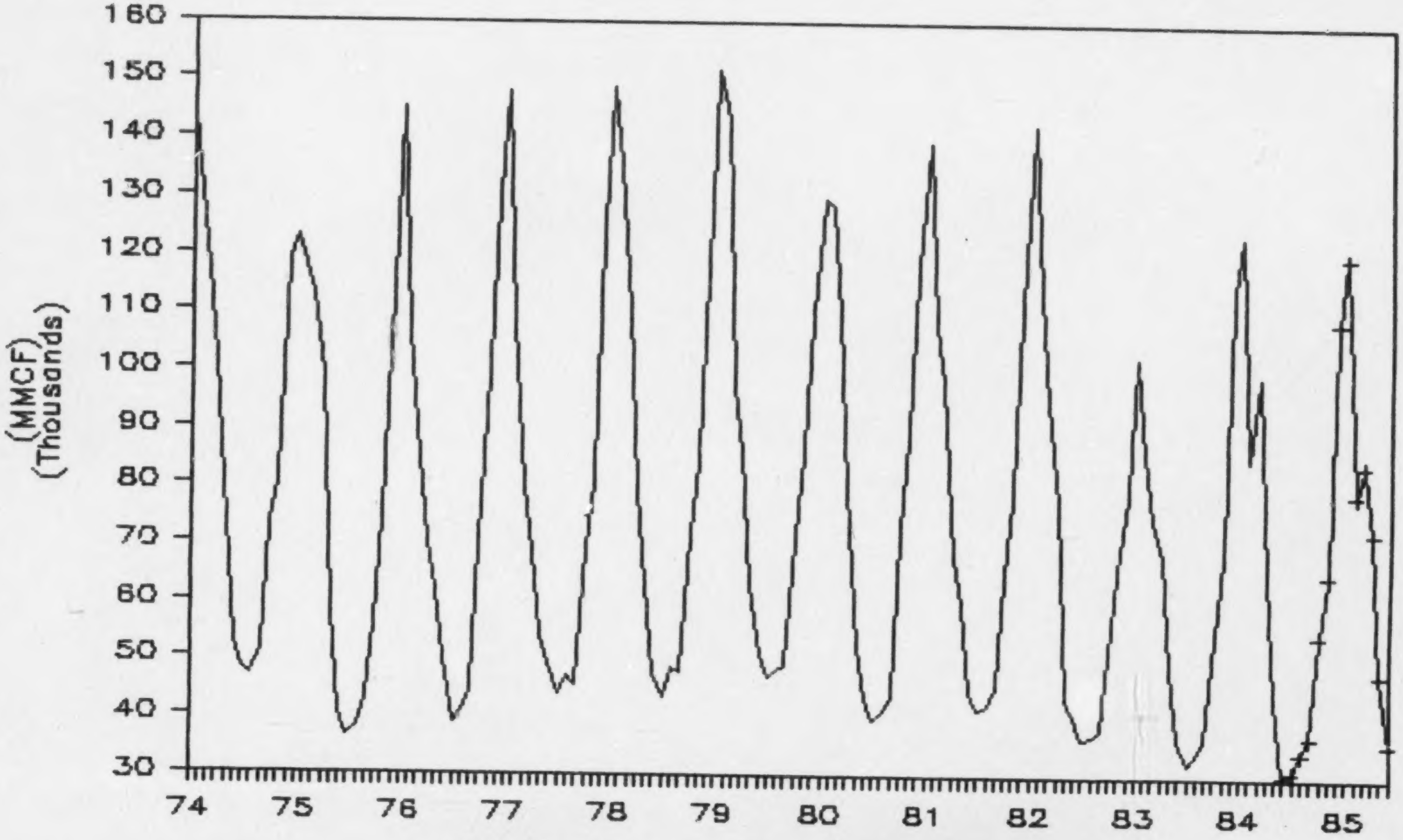
SOURCE: THE OHIO DIVISION OF ENERGY

FIG. B-3. MONTHLY OHIO INDUSTRIAL NATURAL GAS CONSUMPTION ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1985)



SOURCE: THE OHIO DIVISION OF ENERGY

FIG. B-4. MONTHLY TOTAL OHIO NATURAL GAS CONSUMPTION ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1985)



SOURCE: THE OHIO DIVISION OF ENERGY

FIG. B-5. ANNUAL OHIO NATURAL GAS CONSUMPTION AND PRICES: RESIDENTIAL SECTOR (1960 -1983)

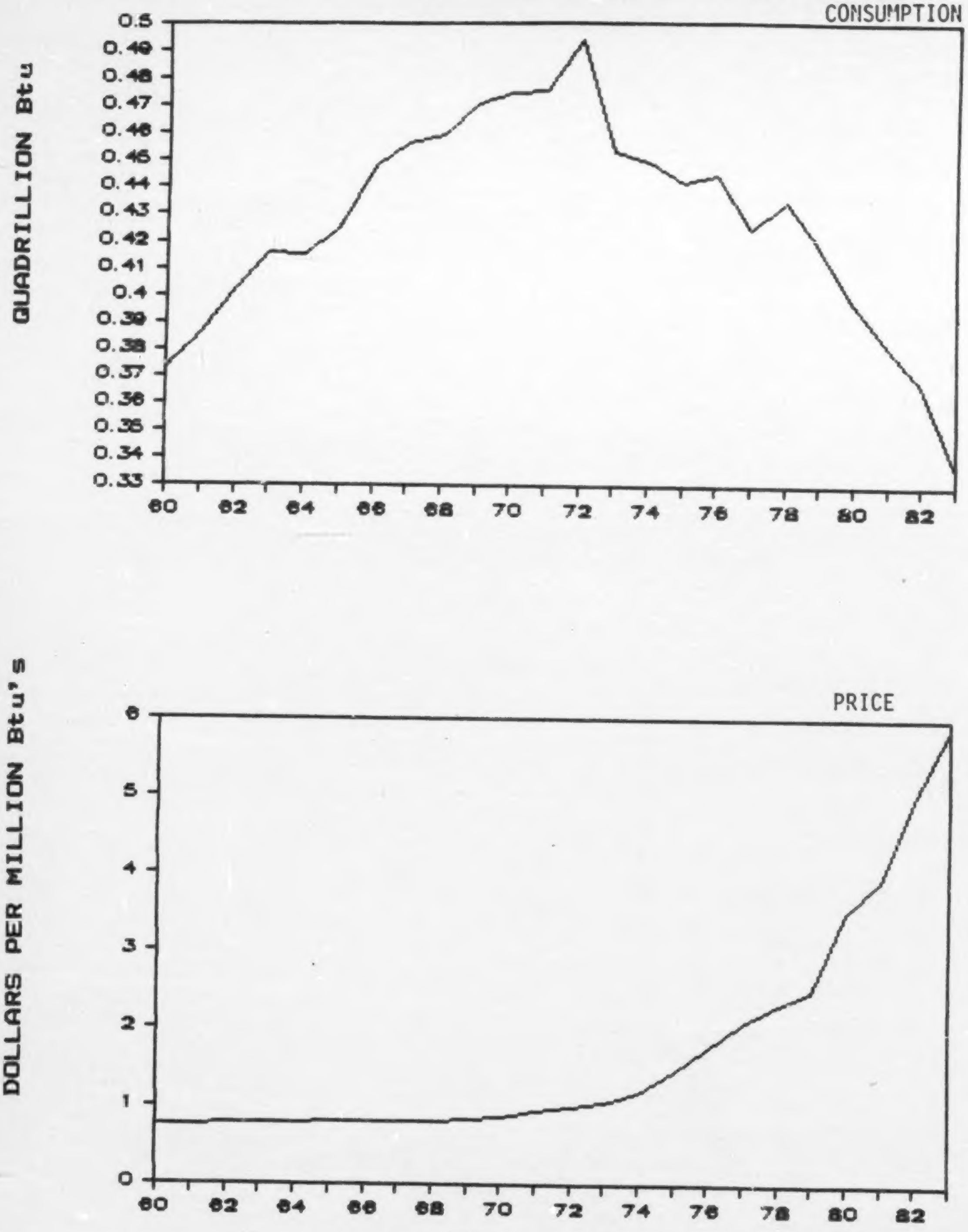
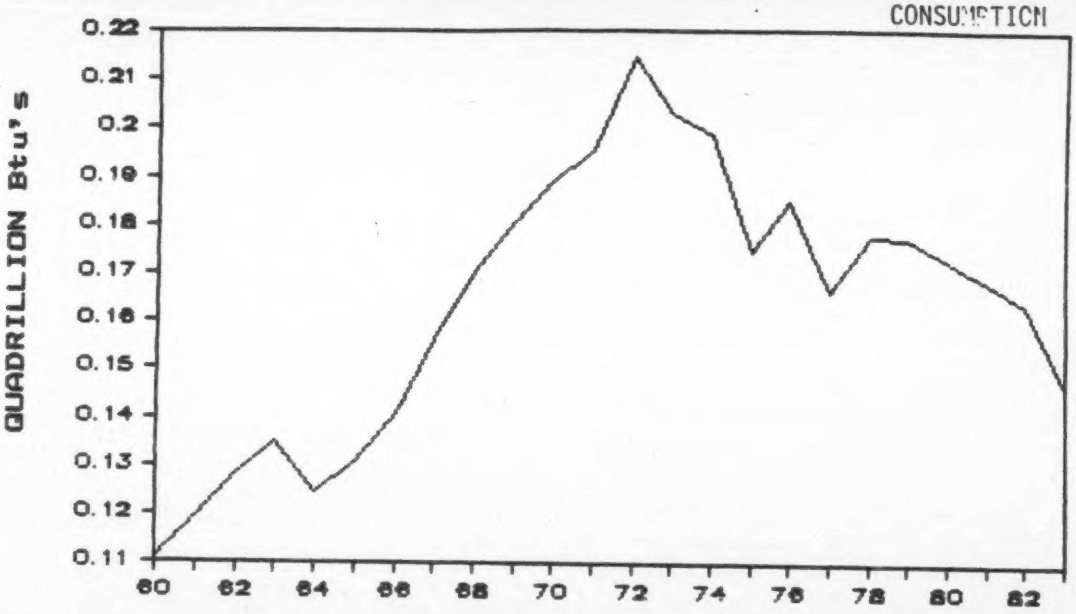


FIG. B-6. ANNUAL OHIO NATURAL GAS CONSUMPTION AND PRICES: COMMERCIAL SECTOR (1960 -1983)



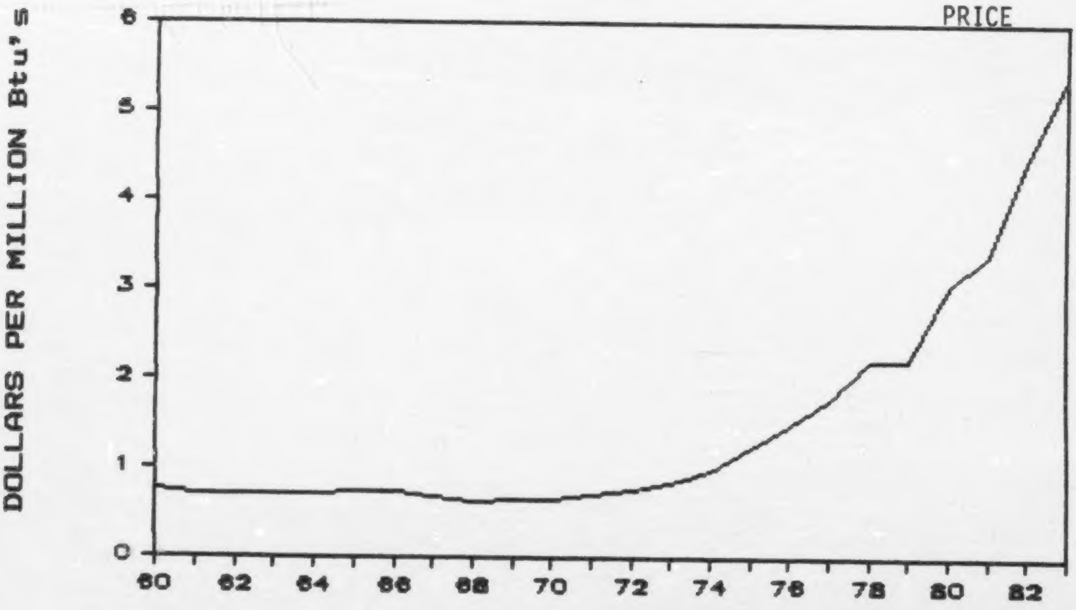
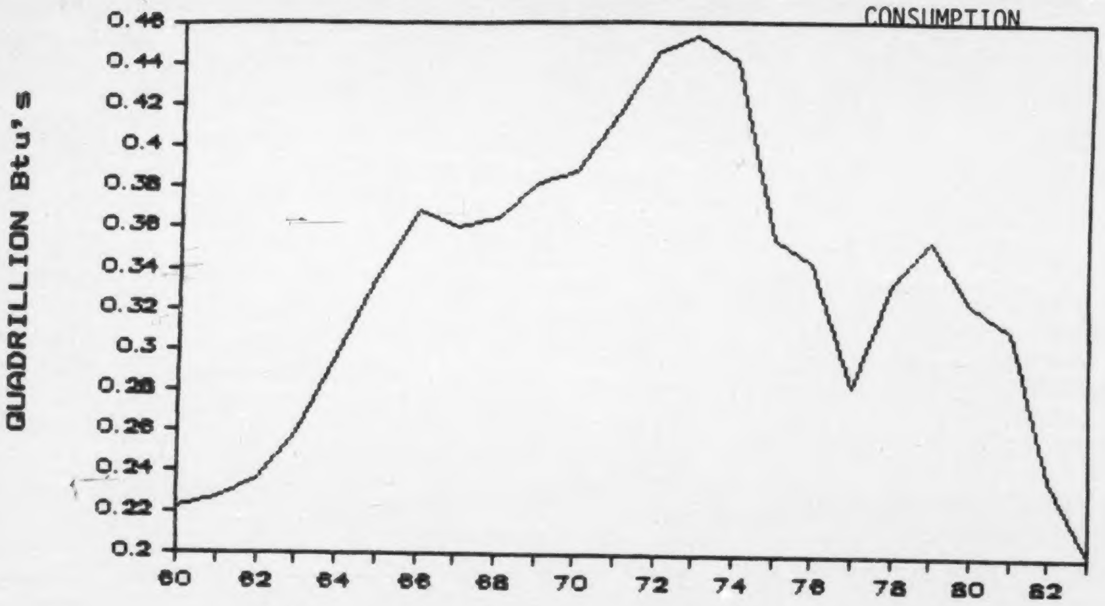


FIG. B-7. ANNUAL OHIO NATURAL GAS CONSUMPTION AND PRICES: INDUSTRIAL SECTOR (1960 -1983)



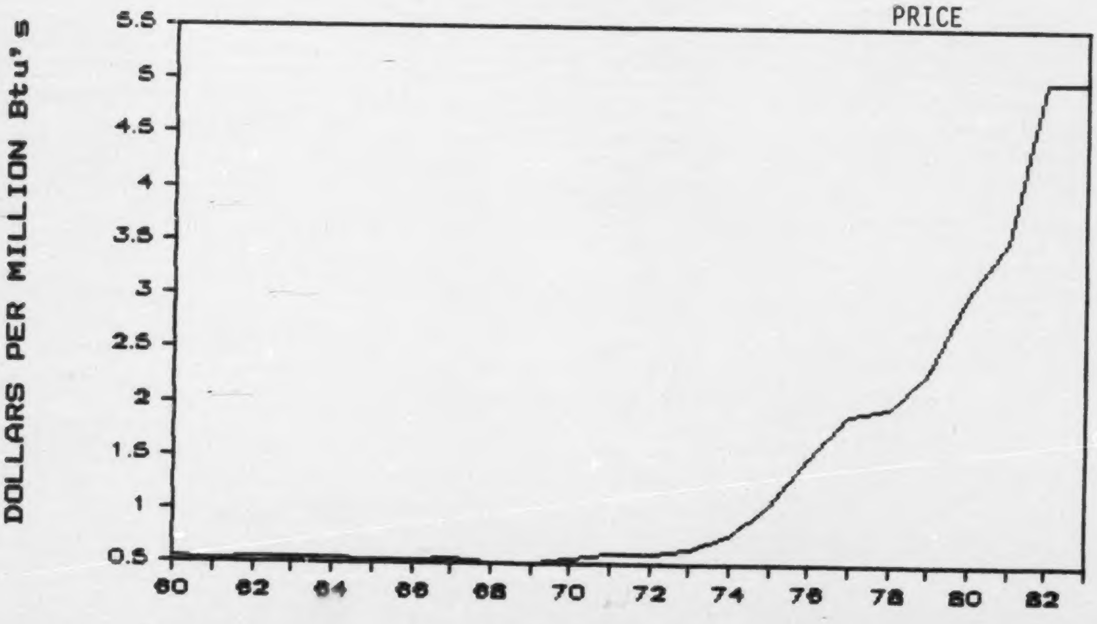


FIG. B-8. MONTHLY OHIO NATURAL GAS CONSUMPTION AND PRICES:
TOTAL OF ALL SECTORS (1960 -1983)

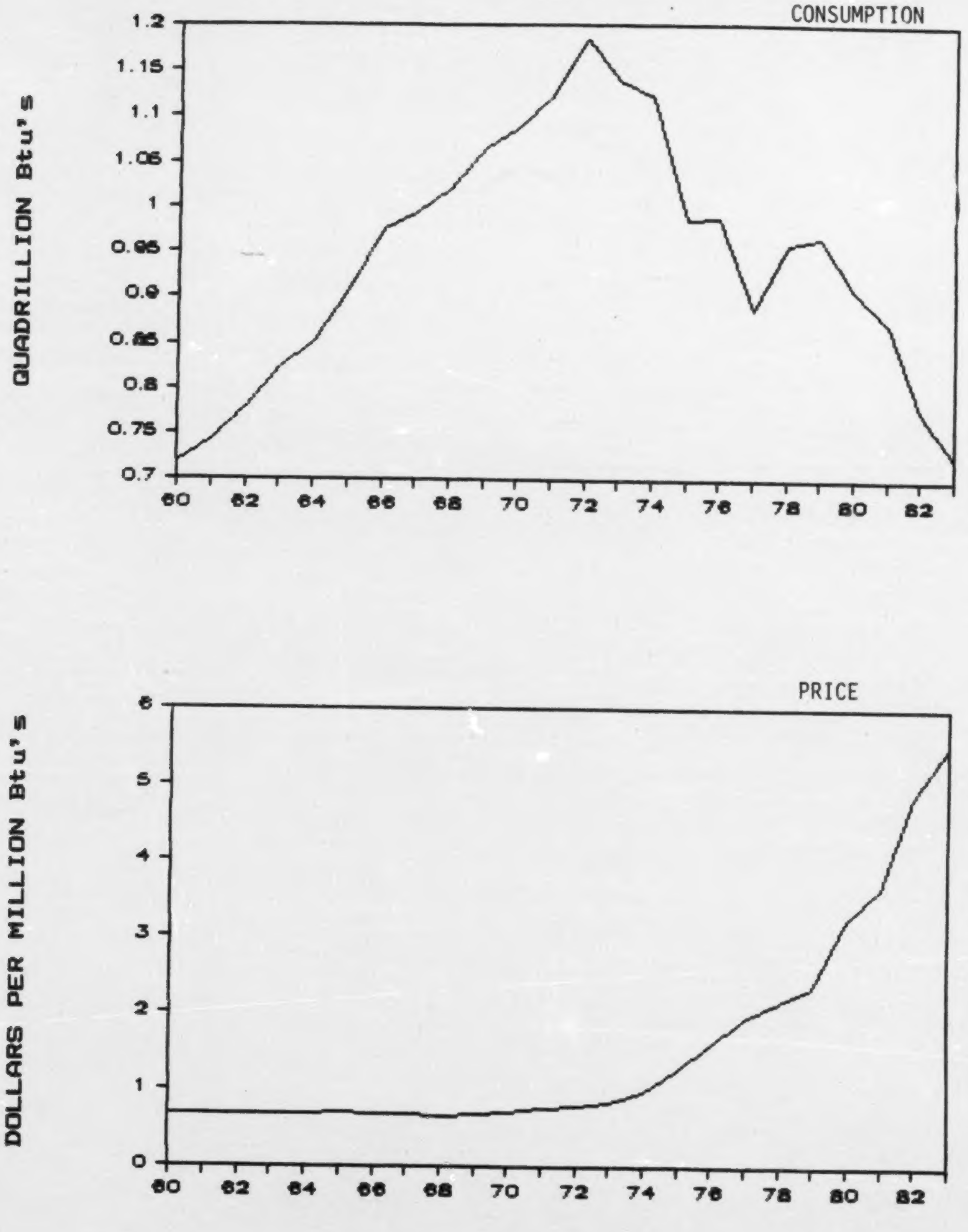
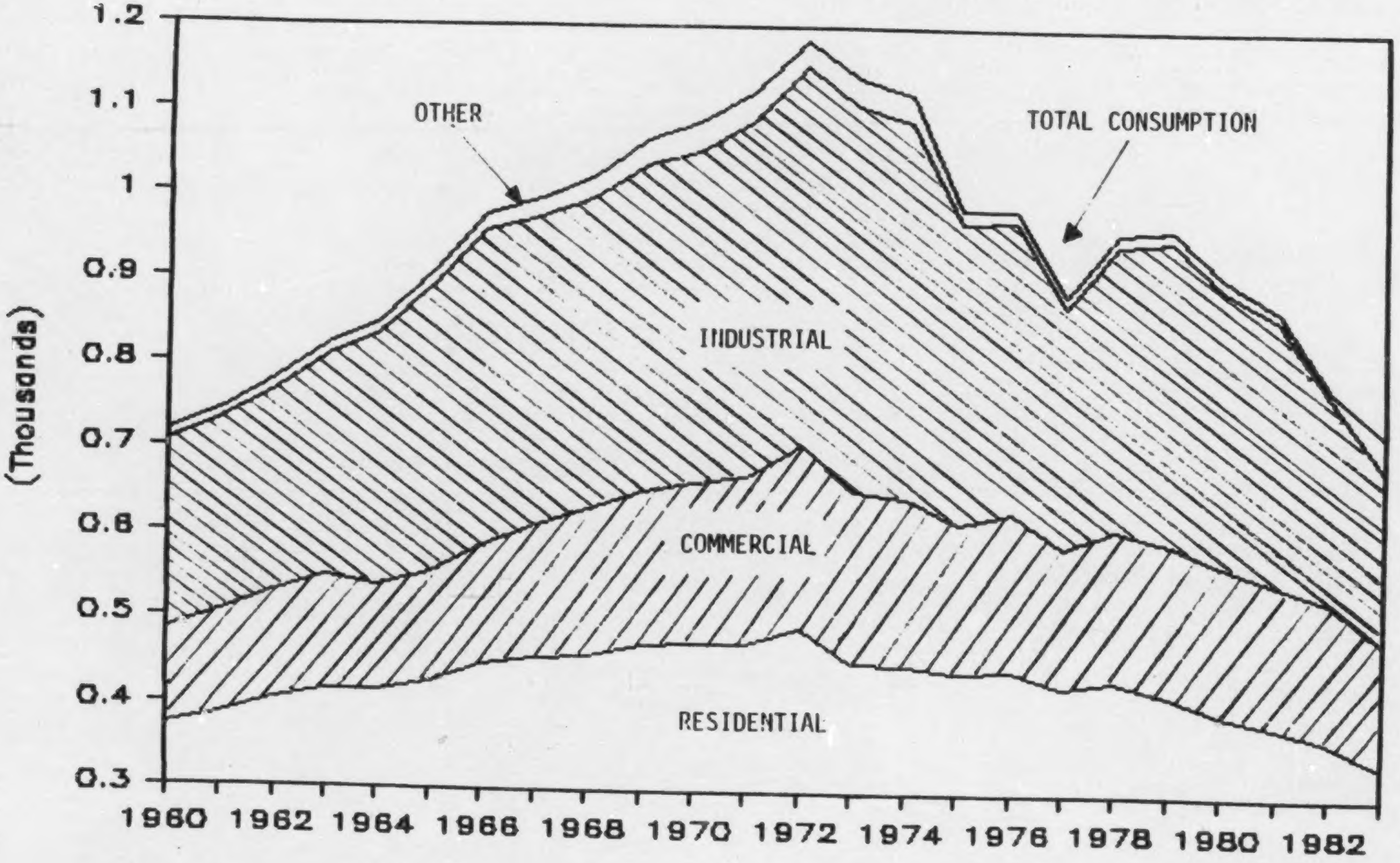


FIG. B-9. ANNUAL OHIO NATURAL GAS CONSUMPTION BY SECTOR



1/25/85 S6260-6(U) A

OHIO DEPARTMENT OF DEVELOPMENT
Division of Energy

State of Ohio
Richard F. Celeste/Governor
Alfred S. Dietzel/Director

An Assessment of the Supplies of Natural Gas and Fuels for Generating Electricity in Ohio

November, 1984 - October, 1985

STATE OF OHIO
Richard F. Celeste, Governor
Alfred S. Dietzel, Director

Department of Development
P.O. Box 1001 • Columbus, Ohio • 43216-1001

December 15, 1984

The Honorable Richard F. Celeste
Governor
Statehouse
Columbus, Ohio 43215

Dear Governor Celeste:

Pursuant to ORC 4905.14, each public electric and gas utility in Ohio is required to file with the Ohio Department of Development, Division of Energy, a report on July and November 1, containing projections of the utility's total demand and fuel supply over the following 12 months. As required by the same statute, we sent copies of the utilities' latest reports to you in November.

The attached report is a summary and analysis of these reports, also required by 4905.14. It includes an evaluation of the Ohio natural gas and electric situation for the coming winter and the next twelve months. It appears at this time that fuel supplies for manufacturing and heating, and for generating electricity will be adequate, even with a 10 percent colder than normal winter and Ohio's increasing industrial activity.

Sincerely,

Alfred S. Dietzel
Director

ASD/kt

cc: William H. Brooks, PUCO, Deputy Chairman
David Johnston, Director, Legislative Service Commission
Harry Meshel, Senate President
Paul Gillmor, Senate Minority Leader
Vern Riffe, House Speaker
Corwin Nixon, House Minority Leader
Ty Marsh, Clerk of the Senate

30 East Broad Street (614) 466-2480

EXECUTIVE SUMMARY

Based on one year forecasts submitted by each of the major electric and natural gas utility companies serving Ohio, and based on independent projections of the Ohio Division of Energy, the supplies of fuels for generating electricity and supplies of natural gas for heating and manufacturing are forecast to be adequate through October 1985. The forecast takes into account the possibility of a 10 percent colder than normal winter and the increased energy demand resulting from accelerating statewide economic recovery.

Supplies of coal, used to generate more than 95 percent of electricity in Ohio, are not expected to fall below a safe two month supply margin for any generating utility company through October 1985.

Supplies of the eight major natural gas distribution companies serving the state are expected to be adequate through October 1985. In addition to the actual delivered product, gas in storage will be sufficient to meet additinal demand in the event of a 10 percent colder than normal winter or strong industrial recovery.

As in past years, roughly fifty percent of the coal supplied to Ohio electric utilities is from out of state sources. Approximately ninety percent of Ohio's natural gas supply will continue to come from out of state sources.

An Assessment of the Supplies of Natural Gas
and Fuels for Generating Electricity in Ohio
from November 1984 - October 1985

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I. INTRODUCTION

This report has been prepared by the Ohio Department of Development, Division of Energy (ODOE), pursuant to Section 4905.14(E) of the Ohio Revised Code. The statute requires ODOE to provide a summary, analysis and recommendations based on the Ohio public utilities' energy supply and demand projections for the twelve month period beginning November 1, 1984. In accordance with Section 4905.14(D), a copy of each utility's November forecast was submitted to the Governor, the President of the Senate, the Minority Leader of the Senate, the Speaker of the House, the Minority Leader of the House, and the Public Utilities Commission of Ohio on November 9, 1984. The utilities' forecasts and historical data are the primary input for this report. Several other sources of information have also been used, including historical energy data developed by the Ohio Division of Energy, federal energy reports, and publications from the American Gas Association and the Electric Power Research Institute. A substantial and successful effort has been undertaken to develop a comprehensive data base and a consistent and comprehensive analytical methodology which supports the Division of Energy's ability to provide timely analyses and forecasts.

Objectives

Major objectives guiding the preparation of this report are:

1. To provide historical data on energy usage, projections of energy availability and projections of consumption for the coming year.
2. To provide an analysis and an interpretation of short-term changes in energy supply and demand.
3. To provide an assessment of the adequacy of natural gas and electric energy supply for the upcoming twelve months.
4. To provide a strategy to prevent or mitigate any interruption or curtailment of service, if a potential deficiency is identified.

Requirements and Scope of This Report

Utilities are required to file short-term forecast information by Ohio Revised Code Section 4905.14, effective July 1, 1978. The Division prepares a summary and analysis of this information under paragraph (E) of this section.

The municipal utilities, industrial facilities and the rural electric cooperatives are not required to file the semi-annual report. Accordingly, this report incorporates data from the major electric and gas utilities serving the state. The Ohio Division of Energy estimates that in 1983 the major utilities provided approximately 90 percent of the electricity consumed in the state and 92 percent of the natural gas.

Ohio Division of Energy Forecasts

As part of its analysis, the Ohio Division of Energy makes its own independent forecasts to serve as validation checks. The Division has the capability to forecast monthly demand by utility and for the state as a whole within a reasonable level of error (less than five percent in most cases). Such forecasts are based on historical month-by-month actual consumption for both electricity and natural gas and other appropriate variables such as population, income, and temperature data. As in any forecast, certain important socio-economic conditions are assumed in the independent forecasts. These assumptions are:

1. Energy consumption generally follows its historical pattern.
2. Socio-economic changes have a minimal effect on short-run energy consumption.

Overview of This Report

The report is divided into two parts: electric energy and natural gas. Materials presented in these two parts are, for the most part, parallel in arrangement. They contain:

(a) a profile of reporting utilities;

(b) historical sources of supplies and suppliers;

(c) consumption history by sector, utility, and state;

(d) the utilities' forecasts and independent forecasts by the Ohio Division of Energy.

Temperature and Energy Consumption

Changes in the observed annual energy requirements of the three major consuming sectors (industrial, commercial, residential) may be explained by a variety of factors. Temperature is a variable which explains much of the observed variation. It is particularly significant in the residential and commercial sectors, during summer and winter periods, when electricity and natural gas are used to maintain comfortable room temperatures.

Two indicators which measure temperature-sensitive energy requirements are heating degree days and cooling degree days. The daily mean temperature is obtained by adding together the maximum and minimum temperatures reported for the day and dividing the total by two. When the daily mean temperature is 65° F, the degree day total is zero. Each degree of mean temperature below 65° F is counted as one heating degree day. This indicator is convenient because the amount of heat required to maintain a certain temperature level is proportional to heating degree days.

The cooling degree days are defined similarly: Each degree of mean temperature above 65° F is counted as one cooling degree day. If the daily mean temperature is 65° F or lower, the cooling degree day total is zero.

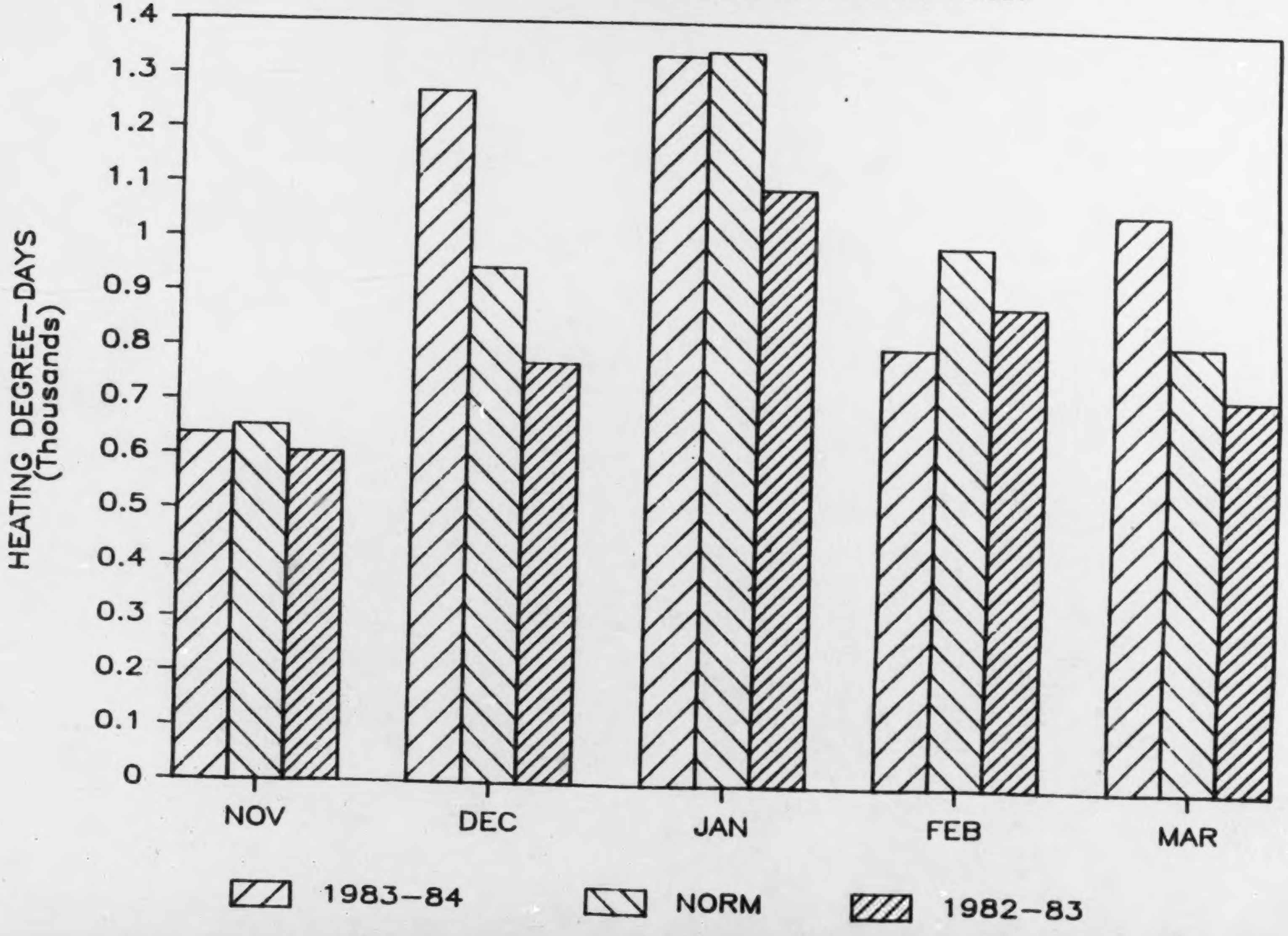
Since most homes and commercial buildings in Ohio are heated by natural gas, the reporting gas utilities are required to submit supply and demand forecasts under a normal winter scenario and a 10 percent colder than normal winter scenario. In addition, the relationship between natural gas consumption and heating degree days is closely monitored during the winter heating season (from November through March). Table 1 and Figure 1 show, for the past two heating seasons, population-weighted state heating degree day summaries. In addition, a normal heating degree day series, defined as the 30-year average of the years 1941 to 1970, is also presented.

TABLE 1. POPULATION-WEIGHTED HEATING DEGREE-DAY SUMMARY FOR OHIO
MARCH 1984

MONTH	1983-1984	NORM	1982-1983
NOVEMBER	638	654	606
DEVIATION FROM NORM	-2.5%		-7.3%
DEVIATION FROM PREVIOUS YEAR	5.3%		-4.1%
DECEMBER	1272	948	774
DEVIATION FROM NORM	34.2%		-18.4%
DEVIATION FROM PREVIOUS YEAR	64.3%		-20.3%
JANUARY	1341	1350	1099
DEVIATION FROM NORM	-0.7%		-18.6%
DEVIATION FROM PREVIOUS YEAR	22.0%		-28.4%
FEBRURARY	809	997	888
DEVIATION FROM NORM	-18.9%		-10.9%
DEVIATION FROM PREVIOUS YEAR	-8.9%		-16.7%
MARCH	1062	822	726
DEVIATION FROM NORM	29.2%		-11.7%
DEVIATION FROM PREVIOUS YEAR	46.3%		-11.9%

SOURCE: National Oceanic and Atmospheric Administration, Historical Climatology Series 5-1 and the Ohio Division of Energy.

FIG. 1. POPULATON-WEIGHTED DEGREE-DAYS FOR OHIO WINTER HEATING SEASONS (1982 AND 1983)



II. ELECTRICITY

This section is based on the November forecasts filed by nine major Ohio electric utilities. Two of these, Columbus and Southern Ohio Electric Company and Ohio Power Company, are subsidiaries of the American Electric Power Company. Since American Electric Power operates as a centrally dispatched, integrated distribution system, the report reviews forecasts of demand and fuel adequacy for the entire American Electric Power Company. The Allegheny Power System is also a centralized power generation and distribution system. One subsidiary Monongahela Power, operates in Ohio. Thus, the forecasts of eight utilities are presented in the report. They are:

1. Allegheny Power System (APS)
    - Monongahela Power
    - Other out-of-state utilities not subject to reporting
2. American Electric Power Company (AEP)
    - Columbus and Southern Ohio Electric Company (C&SOE)
    - Ohio Power Company (OP)
    - Other out-of-state utilities not subject to reporting
3. Cincinnati Gas and Electric Company (CG&E)
4. Cleveland Electric Illuminating Company (CEI)
5. Dayton Power and Light Company (DP&L)
6. Ohio Edison Company (and its subsidiary Pennsylvania Power) (OE)
7. Ohio Valley Electric Corporation (OVEC)
8. Toledo Edison Company (TE)

With the exception of OVEC, each of these is an investor-owned utility supplying electricity to residential, commercial, and industrial customers in its service areas. The Ohio Valley Electric Corporation is a single-customer utility supplying power for the uranium enrichment plant at Piketon, Ohio. It also sells surplus generation to other electric utilities.

Supply and Generation

Source/Supplier of Fuel for Electric Generation

Fuels used in Ohio for electric generation include coal, oil, natural gas and nuclear fuel. Nuclear fuel sources are not monitored by the Division. All other fuels are monitored through the utilities' monthly reports. Tables 2 and 3 (following) list coal and oil deliveries to power plants located in Ohio. The main sources of supply and/or suppliers of these fuels remain the same as in the last reporting period.

Coal deliveries to Ohio electric plants during the twelve months ending August 1984, increased by 8,297,900 tons from the previous twelve month period, an increase of 20.7 percent (Table 2 and Figure 2). Deliveries of oil to Ohio power plants increased by 141,900 barrels during the twelve months ending August 1984 from the previous twelve month period, an increase of 36.4 percent (Table 3 and Figure 3). The increase in coal and oil deliveries is in part, attributable to increased generation over the previous twelve month period. They also reflect the utilities' preemptive stockpiling in response to an anticipated coal strike in September 1984 which did not take place.

Electric Generation by Type of Fuel

Coal remains the main source of fuel for electric generation in Ohio, a condition which is not expected to change in the future. In the twelve month period ending August 1984, 95.4 percent of the total electricity generated in Ohio was from coal. Electricity generated by gas and oil continues to be a negligible 0.1 percent of total generation. Nuclear-generated electricity accounted for 4.5 percent of electricity generated in the state in the twelve months ending August 1984. From April through August 1982, Davis-Besse was inoperative due to a shut down for maintenance. It began generating electricity in September 1982 and was off line for refueling in July 1983. Operations resumed in September 1983. It is currently off line for refueling. Operations are expected to resume in late December 1984.

Table 4 and Figure 4 show the combined monthly totals of the reporting utilities' net generation from Ohio plants. Historical power plant fuel consumption and fuel stocks are displayed in Table 5.

Historical Behavior of Sectoral Requirements

Since the OPEC oil price increases of 1973 and 1978 and the subsequent escalations in inflation and energy prices, the pattern of electricity consumption in Ohio has changed dramatically. Increasing electricity prices and decreasing rates of growth of real income have stimulated conservation activities and fostered economic conditions that have resulted in reduced growth rates in the demand for electricity.

Electricity consumption by the residential and commercial sectors exhibits regular seasonal patterns while the industrial sector fluctuates widely with general economic conditions. (See Appendix A). The mild winter of 1982-83 resulted in decreased residential sector consumption, particularly during the months of January through March (Table 6 and Figure 5A). The relatively severe weather of December 1983 and March 1984 resulted in increased residential consumption. In December 1982, industrial electricity consumption dipped lower than any consumption level since January 1971. A severe downturn in the manufacturing sector, particularly in automobile-related industries, had resulted in a monthly industrial demand level of 3100 to 3400 megawatt-hours. Beginning in 1983 with the general economic recovery, industrial demand for electricity has gradually increased. The March consumption of 4020 megawatt-hours is the highest monthly industrial consumption since March 1981.

For the twelve month period ending in August 1984, total electricity consumption in the state was 11.1 percent higher than during the preceding twelve month period (see Table 6 and (Figures 5A, 5B). Comparing 1982-83 with 1983-84 usage, residential sector consumption rose 5.8 percent, commercial sector consumption rose 5.6 percent and industrial sector consumption rose 19.9 percent. Figure 5E is a comparison of the monthly electricity consumption for each sector, from January 1971 to August 1984.

Twelve Month Electricity Demand Forecasts

Each electric utility submits a forecast of total service area demand for November 1984 through October 1985. These forecasts are displayed in Appendix A, Tables A-1 through A-8, along with independent forecasts prepared by the Ohio Division of Energy. The Ohio Division of Energy also prepares independent twelve month forecasts of electricity demand for the state of Ohio, by sector. These forecasts are displayed in Appendix A, Tables A-9 through A-12.

Electric Demand Forecasts by Utility Service Area

The Ohio Division of Energy utility service area forecasts are based on monthly data from utility reports from January 1971 through August 1984. No independent forecast is provided for OVEC, because this utility has only one customer whose demand is pre-arranged. Because of the overlapping months for utility forecasts submitted on July 1 and November 1, the utilities may elect to use their previous forecasts for those overlapping months in the new forecasting period.

Cincinnati Gas and Electric, Columbus and Southern Ohio Electric, Dayton Power and Light, Ohio Edison, and Ohio Power retained their forecasts submitted in July for the months November 1984 through June 1985. Four utilities adjusted their forecasts. Both Cleveland Electric Illuminating and Toledo Edison raised their November and December forecasts, (2.7% and 0.4% respectively) while retaining the previous forecast for the first six months of 1985. Appalachian Power System and Ohio Valley Electric Corporation raised the forecast for each month an average of 2.1% and 3.4% respectively.

The forecasts prepared by ODOE have been revised since July. The ODOE forecast for each month is generally higher than the corresponding forecast of Allegheny Power System, Cincinnati Gas and Electric, and Ohio Edison. American Electric Power, Cleveland Electric Illuminating, Dayton Power and Light, and Toledo Edison have submitted forecasts that are higher than ODOE's forecast for some months and lower than ODOE's forecast for some months. (See Appendix A). The differences between ODOE forecasts and the utilities' forecasts were investigated in a number of cases. In the majority of cases so investigated the differences in question were found to be not statistically significant.

Assessment of Utility Fuel Adequacy

Tables 7-A and 7-B present the utilities' projections of deliveries, consumption, and end-of-month stocks of coal and oil for the generation of electricity. Table 7-C presents the Division's independent assessment of the adequacy of supply of generating fuels. The Division's projections are presented for the CAPCO Group of utilities, which include Cleveland Electric Illuminating, Ohio Edison, and Toledo Edison; for the American Electric Power and Allegheny Power Systems, and for Dayton Power and Light, Cincinnati Gas and Electric, and the Ohio Valley Electric Corporation.

Coal

The Division's projections, as well as those of the electric utilities indicate an adequate supply of coal throughout the forecast period for each utility serving the state.

To derive the Ohio Division of Energy projections, average daily requirements of coal were determined by dividing projected monthly coal consumption by the number of days in the month. End-of-month stocks were derived by considering consecutively end of September 1984 stocks, projected monthly coal delivery schedules as submitted by the utilities, and projected monthly coal consumption levels. Number of days' supply of coal was estimated on the basis of average daily requirements in subsequent months and the level of end-of-month stocks for the month in question.

Coal consumption projections were made through the use of a formula which adjusts coal consumption levels for changes in the consumption of oil, natural gas, and nuclear fuel in a manner that is consistent with the projected demand or net energy for load. In making these projections, it is assumed that the following conditions will be satisfied:

1. Monthly demand (net energy for load) for November 1984 through September 1985 will be realized in the manner projected by the utility companies.
2. Energy required to supply projected net energy for load in a given month from November 1984 through October 1985 will be proportional to the energy consumed in supplying the actual net energy for load in the previous twelve month period.
3. Monthly delivery schedules for all fuels in 1984 and 1985 will be met in the manner projected by the utility companies.

4. With the exception of Toledo Edison, all of the electricity required to meet the net energy for load projection will be generated by coal.

Oil

Each electric utility forecasts an adequate supply of oil for the generation of electricity throughout the forecast period. The decline in oil usage in Ohio has resulted in net generation from oil of less than 1% of total net generation. Currently oil is being used as a start-up fuel and in peaking units. Due to the currently high reserve margins for all utilities, the Division does not anticipate that the utilities will generate much electricity from peaking units and consequently our projections indicate that there will be an adequate supply of oil, under normal generating conditions.

TABLE 2. SOURCE OF COAL SUPPLY TO ELECTRIC UTILITIES
OHIO PORTION
1000 Short Tons

Month	1	2	3	4	6	7&8	9	Other	Total
1982									
January	0.0	128.4	23.9	2,019.3	222.7	1,097.7	103.7	200.2	3,795.9
February	0.0	123.0	19.4	2,137.4	388.2	1,187.4	51.2	191.7	4,098.3
March	0.0	173.4	27.9	2,303.4	382.9	1,505.2	56.7	237.9	4,687.4
April	0.0	136.9	37.3	2,031.0	237.3	1,457.9	109.8	168.8	4,179.0
May	0.0	109.5	40.3	1,554.9	200.8	1,058.5	28.6	150.8	3,143.4
June	0.7	121.7	31.0	1,976.6	170.0	1,090.1	97.3	134.0	3,620.7
July	0.0	139.0	12.5	1,537.3	126.3	590.8	76.4	131.8	2,614.1
August	0.0	134.7	4.3	1,998.6	317.3	1,299.2	79.6	178.7	4,012.4
September	0.0	139.2	36.4	1,982.4	285.8	1,094.8	67.5	184.8	3,790.9
October	0.0	173.4	7.1	1,879.1	346.1	859.7	77.6	64.4	3,407.4
November	0.0	205.9	33.1	1,973.1	306.1	1,202.3	118.2	58.2	3,896.9
December	0.0	136.0	42.3	1,770.8	297.8	1,106.2	100.2	161.4	3,614.7
Total	0.7	1,721.1	315.5	23,163.9	3,281.3	13,549.8	966.8	1,862.7	44,861.1
% of Total	.0	3.8	0.7	51.6	7.3	30.2	2.2	4.2	100.0
1983									
January	0.0	105.8	37.9	1,865.6	292.9	938.4	62.2	239.7	3,542.5
February	0.0	76.0	25.0	1,608.6	291.9	793.3	9.0	102.1	2,905.9
March	0.0	109.1	9.1	1,274.6	349.9	973.2	5.8	98.7	2,820.4
April	0.0	85.5	14.7	1,438.8	240.0	685.5	12.0	0.0	2,476.5
May	0.0	166.3	26.7	1,937.3	264.2	1,003.2	4.4	1.5	3,403.6
June	0.0	160.7	38.0	1,945.5	140.5	991.0	29.9	6.3	3,311.9
July	0.0	172.4	37.5	1,792.4	73.6	872.4	58.7	0.0	3,007.0
August	0.0	267.1	56.6	2,172.1	185.5	1,234.3	48.7	4.4	3,968.7
September	0.0	222.5	47.0	2,039.4	216.5	1,056.5	7.8	0.0	3,589.7
October	0.0	199.5	31.9	2,084.5	282.7	1,079.5	0.0	0.0	3,678.1
November	0.0	207.6	21.5	1,961.4	267.1	1,113.0	37.0	4.8	3,612.4
December	0.0	155.9	25.6	1,895.0	270.6	1,188.1	143.3	0.0	3,678.5
Total	0.0	1,928.4	371.5	22,015.2	2,875.4	11,928.4	418.8	457.5	39,995.2
% of Total	0.0	4.8	0.9	55.0	7.2	29.8	1.0	1.1	100.0
1984									
January	0.0	196.9	36.0	2,144.9	310.4	1,272.5	46.1	0.0	4,006.8
February	0.0	211.7	42.4	2,337.8	384.1	1,302.1	40.2	0.0	4,318.3
March	0.0	258.9	62.5	2,499.4	387.1	1,170.7	59.1	0.0	4,437.7
April	0.0	206.8	44.3	2,248.9	466.3	1,064.3	16.4	0.0	4,047.0
May	0.0	194.5	19.2	2,451.0	374.9	1,273.0	0.0	0.0	4,312.6
June	0.0	176.2	28.1	2,173.4	382.0	1,217.1	15.2	0.0	3,992.0
July	0.0	185.7	33.1	2,360.1	170.2	1,229.6	19.8	0.0	3,998.5
August	0.0	190.9	27.5	2,523.7	493.2	1,537.4	0.0	0.0	4,772.7

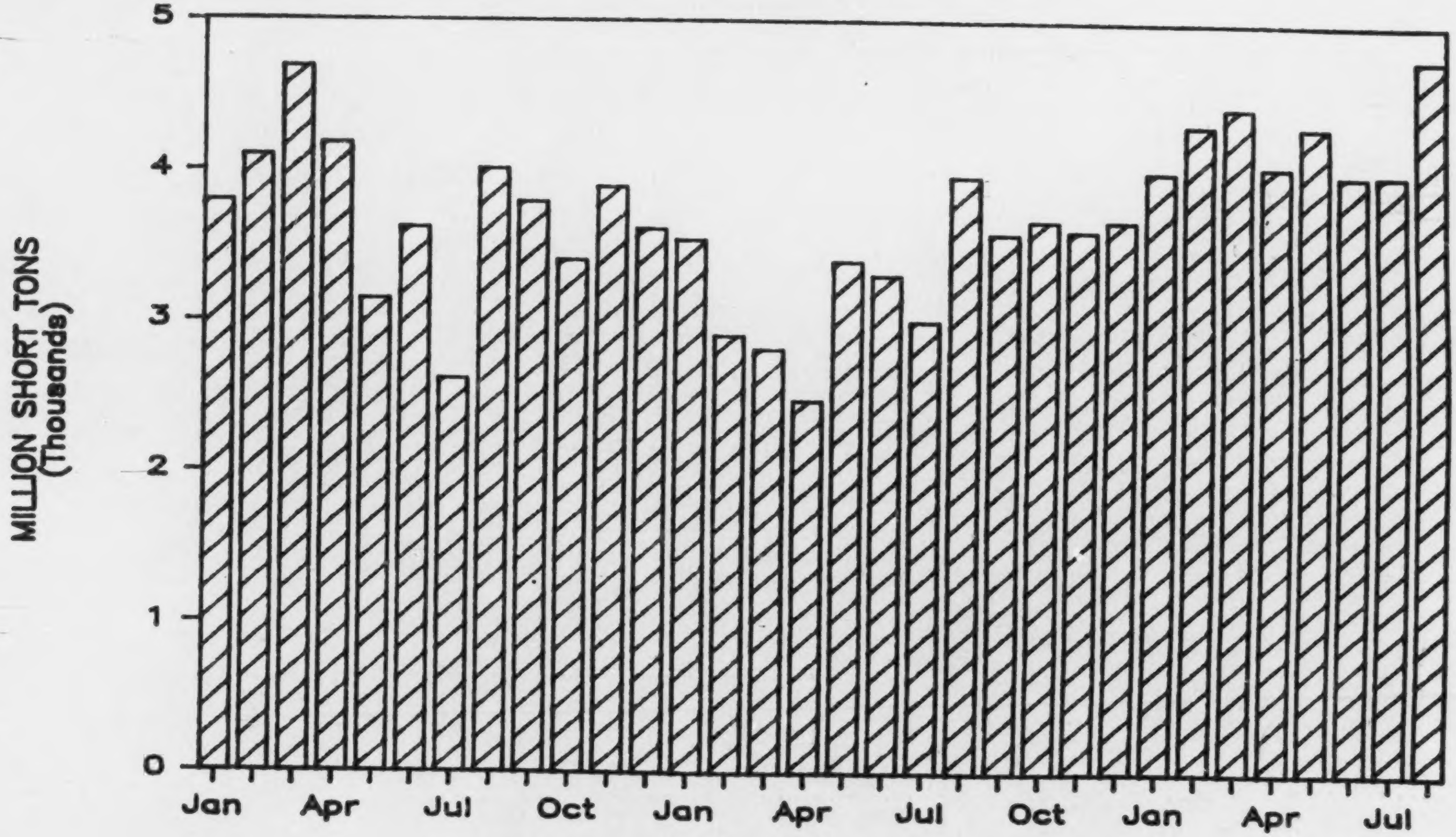
District

1. Eastern Pennsylvania
2. Western Pennsylvania
3. Northern West Virginia
4. Ohio
6. Panhandle (in West Virginia)
7. Southern No. 1 (in West Virginia and Virginia)
8. Southern No. 2 (in West Virginia and Eastern Kentucky)
9. Western Kentucky

Other - Primarily from Wyoming and Utah

Source: Form FPC 423

FIG. 2. MONTHLY COAL DELIVERIES TO POWER PLANTS IN OHIO
(JANUARY 1982 - AUGUST 1984)



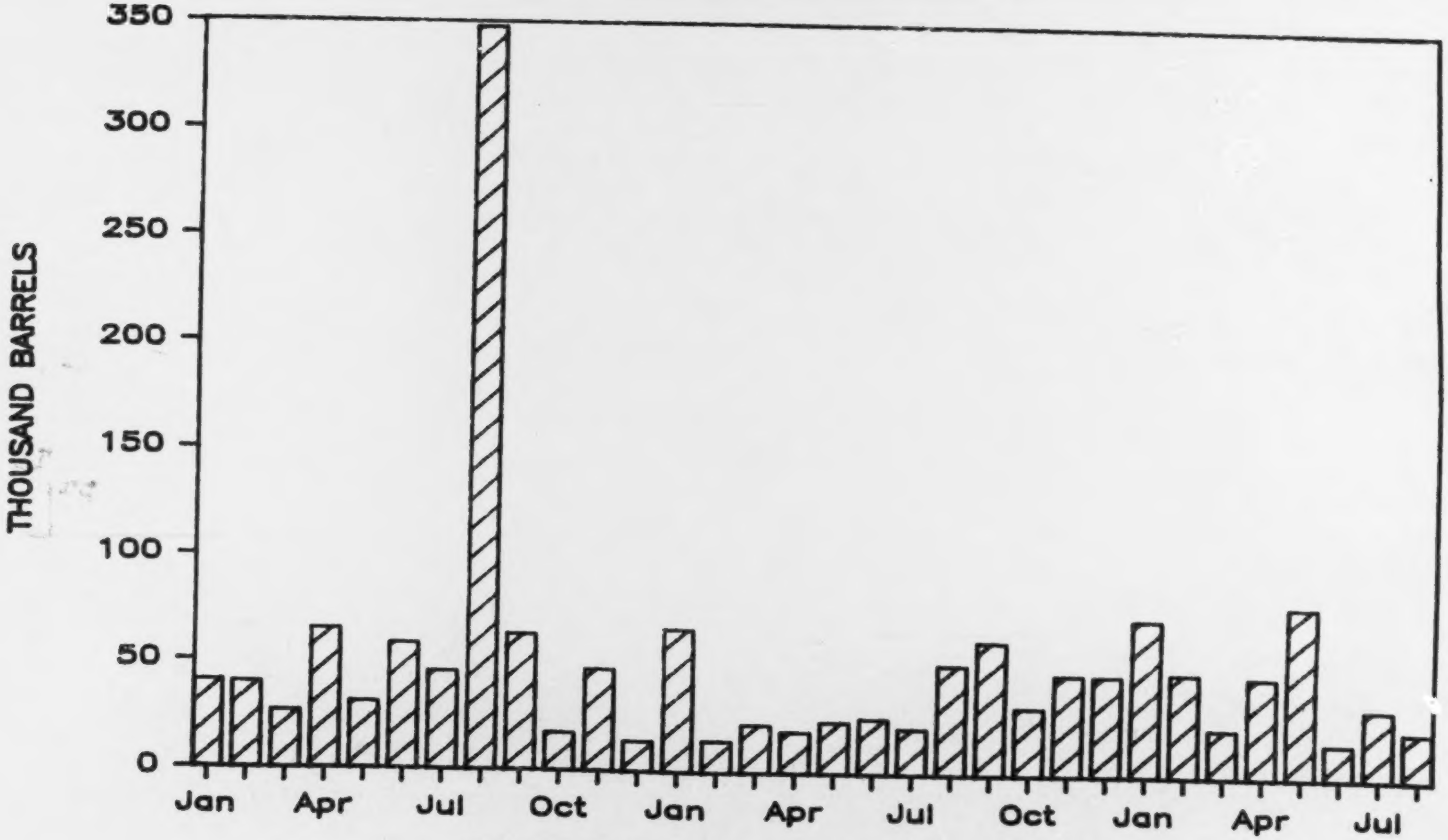
SOURCE: THE OHIO DIVISION OF ENERGY

Table 3. Major Oil Suppliers to Electric Utilities
Ohio Portion
(Thousand Barrels)

1982	Allied	Marathon	Standard	Union	Other	Total
January	35.9	0.2	2.8	1.8	0.0	40.7
Feburary	34.7	0.2	2.3	2.9	0.0	40.1
March	21.8	0.0	3.4	1.5	0.0	26.7
April	62.8	0.0	1.8	0.9	0.0	65.5
May	26.8	0.0	2.3	2.2	0.0	31.3
June	50.6	0.0	6.5	1.8	0.0	58.9
July	35.7	0.2	7.9	2.3	0.0	46.1
August	140.2	0.0	204.6	2.8	0.0	347.6
September	58.5	0.6	3.4	1.2	0.0	63.7
October	13.5	0.0	2.5	1.7	0.0	17.7
November	42.2	0.0	2.5	3.0	0.0	47.7
December	9.4	0.0	1.9	2.8	0.0	14.1
Total	532.1	1.2	241.9	24.9	0.0	800.1
% of Total	66.5	0.1	30.2	3.1	0.0	100.0
1983						
January	36.5	18.1	9.1	3.0	0.0	66.7
Feburary	7.3	0.2	5.2	2.0	0.0	14.7
March	7.0	0.6	11.1	2.0	2.0	22.7
April	6.8	0.2	9.5	2.0	1.0	19.5
May	9.2	0.4	8.5	4.0	2.1	24.2
June	10.9	0.0	11.0	4.0	0.0	25.9
July	11.5	0.2	6.7	3.0	0.0	21.4
August	38.8	0.4	4.0	3.0	5.2	51.4
September	52.4	0.2	5.1	0.0	4.9	62.6
October	14.0	0.4	14.6	1.0	1.7	31.7
November	35.7	0.2	6.1	3.0	2.6	47.6
December	18.4	0.0	16.2	2.0	10.5	47.1
Total	508.6	20.9	90.9	27.0	19.5	666.9
% of Total	76.3	3.1	13.6	4.0	2.9	100.0
1984						
January	66.0	0.2	2.4	3.0	2.0	73.6
February	38.9	0.4	2.8	1.0	5.2	48.3
March	12.8	0.4	4.5	2.0	2.7	22.4
April	40.6	3.3	0.0	0.0	2.9	46.8
May	70.6	0.6	4.5	1.0	3.6	80.3
June	11.6	0.6	3.4	0.0	0.6	16.2
July	21.5	0.2	6.7	1.0	3.1	32.5
August	12.5	0.6	4.4	0.0	5.0	22.5

Source: Form FPC 4 and the Ohio Division of Energy

FIG. 3. MONTHLY OIL DELIVERIES TO POWER PLANTS IN OHIO (JANUARY 1982 - AUGUST 1984)



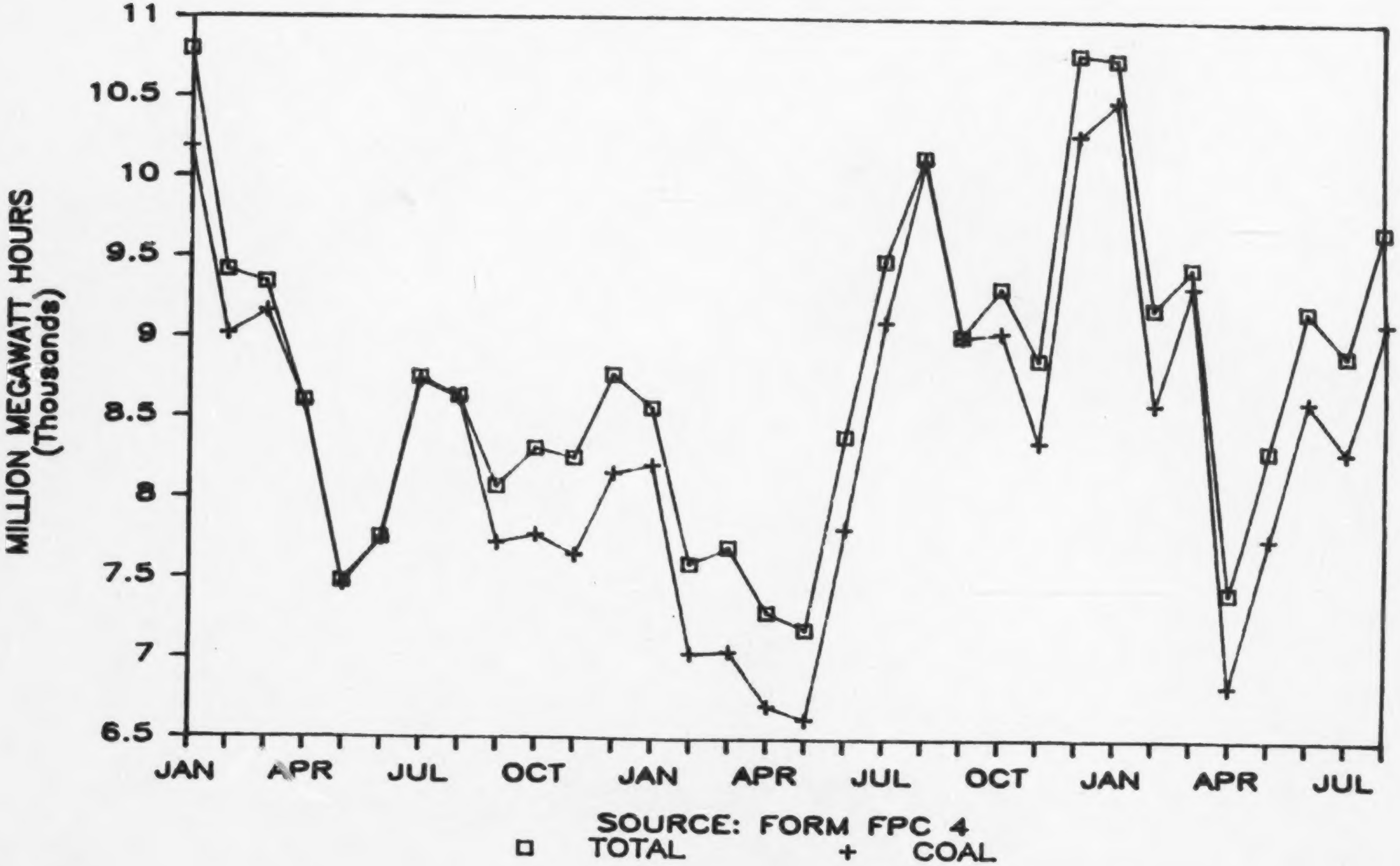
SOURCE: THE OHIO DIVISION OF ENERGY

Table 4. Major Ohio Utilities - Net Generation by Types of Fuel (Ohio Portion) (Thousand MWH)

1982	COAL	OIL	GAS	NUCLEAR	TOTAL
January	10194	27	3	576	10800
February	9026	6	2	386	9420
March	9170	8	3	165	9346
April	8593	14	3	0	8610
May	7464	13	3	0	7480
June	7750	6	0	0	7756
July	8741	11	5	0	8757
August	8627	12	3	0	8642
September	7726	8	1	343	8078
October	7778	2	1	537	8318
November	7653	2	0	604	8259
December	8165	0	0	615	8780
Total	100887	109	24	3226	104246
% of Total	96.78	0.10	0.02	3.09	100.00
1983					
January	8219	-3	1	357	8574
February	7041	-1	0	560	7600
March	7055	1	1	647	7704
April	6716	8	1	574	7299
May	6630	4	-9	567	7192
June	7822	7	2	567	8398
July	9114	9	4	370	9497
August	10124	16	3	0	10143
September	9023	5	1	0	9029
October	9054	5	1	271	9331
November	8368	6	4	506	8884
December	10290	14	4	487	10795
Total	99456	71	13	4906	104446
% of Total	95.22	0.07	0.01	4.70	100.00
1984					
January	10503	9	4	249	10765
February	8608	2	0	596	9206
March	9344	4	2	111	9461
April	6847	4	1	579	7431
May	7771	3	1	546	8321
June	8632	6	1	556	9195
July	8316	16	1	586	8919
August	9122	6	1	569	9698

Source: Form FPC 4 and the Ohio Division of Energy

FIG. 4. NET GENERATION BY TYPE OF FUEL,
OHIO PORTION OF MAJOR OHIO ELECTRIC UTILITIES
(JANUARY 1982 - AUGUST 1984)



SOURCE: FORM FPC 4

Table 5. Major Ohio Utilities
Fuel Consumption and Stocks
(Ohio Portion)

	Coal (Thousand Tons)		Oil (Thousand 42-Gal. Bbls.)		Gas (MMCF)
1982	Burned	In Stock	Burned	In Stock	Burned
January	4,629.5	9,351.6	147.9	735.8	119.0
February	4,334.6	9,241.2	71.1	721.3	59.0
March	4,072.6	9,866.8	67.0	723.1	68.0
April	3,832.1	10,153.7	74.1	762.0	73.0
May	3,191.5	10,304.0	75.0	698.4	38.0
June	3,412.2	10,762.3	78.7	733.2	23.0
July	4,023.2	9,239.8	61.8	755.0	25.0
August	3,880.1	9,147.0	74.2	716.6	85.0
September	3,494.3	9,630.0	51.9	779.2	35.4
October	3,453.1	9,814.9	55.7	744.3	34.0
November	3,271.3	9,563.6	72.1	1,456.5	35.4
December	3,591.4	10,082.9	36.5	1,074.5	24.7
Total	45,185.9	117,157.8	866.0	9,899.9	619.5
Avg/Month	3,765.5	9,763.2	72.2	825.0	51.6
1983					
January	3,582.2	9,807.8	51.1	1,470.5	45.5
February	3,068.6	9,694.0	43.5	1,468.1	17.0
March	3,076.2	9,378.9	39.7	1,468.5	42.5
April	2,920.4	9,649.2	48.8	624.9	39.6
May	2,851.0	10,308.8	52.9	410.6	25.6
June	3,347.7	10,363.6	45.3	386.0	68.6
July	3,953.3	9,440.7	57.7	378.4	86.5
August	4,416.1	9,038.8	64.0	365.0	76.5
September	3,902.5	8,567.9	38.2	324.8	22.8
October	3,934.2	8,458.8	41.0	385.0	33.0
November	3,623.0	8,502.4	48.9	408.6	75.8
December	4,561.6	7,487.1	75.3	326.3	81.8
Total	43,236.8	110,698.0	606.4	8,016.7	615.2
Avg/Month	3,603.1	9,224.8	50.5	668.1	51.3
1984					
January	4,635.1	6,913.0	58.3	396.7	76.0
February	3,756.3	7,364.0	54.3	390.5	14.0
March	4,113.5	7,793.7	16.6	397.7	56.1
April	2,977.2	8,445.0	34.8	388.6	44.7
May	3,362.8	9,761.1	44.3	449.5	35.3
June	3,726.9	10,164.8	42.9	450.7	53.2
July	3,667.3	10,541.4	42.0	441.3	37.8
August	3,951.9	11,400.6	47.0	418.7	14.8

Source: Form FPC 4 and the Ohio Division of Energy

Table 6. Ohio Electricity Consumption
September 1982 - August 1984
(Thousand MWH)

	September	October	November	December	January	February	March	April	May	June	July	August	Total
Residential													
1983-84	2604.2	1935.6	2177.7	2727.2	3491.7	2890.9	2771.2	2448.2	2111.4	2190.4	2349.8	2465.8	30164.1
1982-83	2052.2	1943.4	2113.9	2527.4	2909.8	2725.6	2390.5	2378.3	2016.9	2023.7	2603.0	2817.6	28502.3
% Change	26.9	-0.4	3.0	7.9	20.0	6.1	15.9	2.9	4.7	8.2	-9.7	-12.5	5.8
Commercial													
1983-84	2060.0	1716.0	1677.7	1850.2	2048.1	1901.8	1889.0	1711.5	1701.9	1924.5	2013.1	2098.7	22592.5
1982-83	1805.8	1673.0	1624.5	1743.6	1838.6	1778.8	1739.6	1661.4	1604.0	1758.9	2047.1	2125.4	21400.7
% Change	14.1	2.6	3.3	6.1	11.4	6.9	8.6	3.0	6.1	9.4	-1.7	-1.3	5.6
Industrial													
1983-84	3616.3	3606.7	3554.0	3446.8	3707.8	3718.9	4020.3	3927.2	4005.8	3991.7	3809.4	3998.6	45403.5
1982-83	3107.5	3014.8	2910.7	2779.2	2921.2	3102.7	3301.5	3201.3	3342.5	3374.8	3280.9	3542.1	37879.2
% Change	16.4	19.6	22.1	24.0	26.9	19.9	21.8	22.7	19.8	18.3	16.1	12.9	19.9
Other													
1983-84	432.0	412.5	444.3	480.8	497.7	425.7	424.1	380.5	372.6	397.9	398.7	411.1	5077.9
1982-83	395.0	424.7	441.4	469.2	487.2	451.5	450.6	399.4	386.0	404.8	410.2	437.6	5157.6
% Change	9.4	-2.9	0.7	2.5	2.2	-5.7	-5.9	-4.7	-3.5	-1.7	-2.8	-6.1	-1.5
Total													
1983-84	8712.5	7670.8	7853.7	8505.0	9745.3	8937.3	9104.6	8467.4	8191.7	8504.5	8571.0	8974.2	103230.0
1982-83	7360.5	7055.9	7090.5	7519.4	8156.8	8058.6	7882.2	7640.4	7349.4	7562.2	8341.2	8922.7	92939.8
% Change	18.4	8.7	10.8	13.1	19.5	10.9	15.5	10.8	11.5	12.5	2.8	0.6	11.1
Customers (1000's)													
Residential	3469.2	3474.3	3478.3	3485.3	3490.2	3493.5	3496.1	3496.2	3492.9	3489.7	3486.7	3487.8	41840.1
Commercial	356.3	356.6	355.5	355.7	356.4	356.1	355.7	356.2	357.2	357.4	352.8	358.1	4274.1
Industrial	24.8	24.8	25.0	25.1	25.2	25.4	25.5	25.8	25.8	25.9	26.0	26.1	305.5
Total	3850.3	3855.7	3858.8	3866.1	3871.8	3875.0	3877.3	3878.1	3876.0	3873.0	3865.5	3872.0	46419.6

Source: The Ohio Electric Utility Institute: Monthly Summaries
and ODOE Form SE-1

FIG. 5A. OHIO RESIDENTIAL SECTOR ELECTRICITY CONSUMPTION
(1982 - 1983 VS. 1983 - 1984)

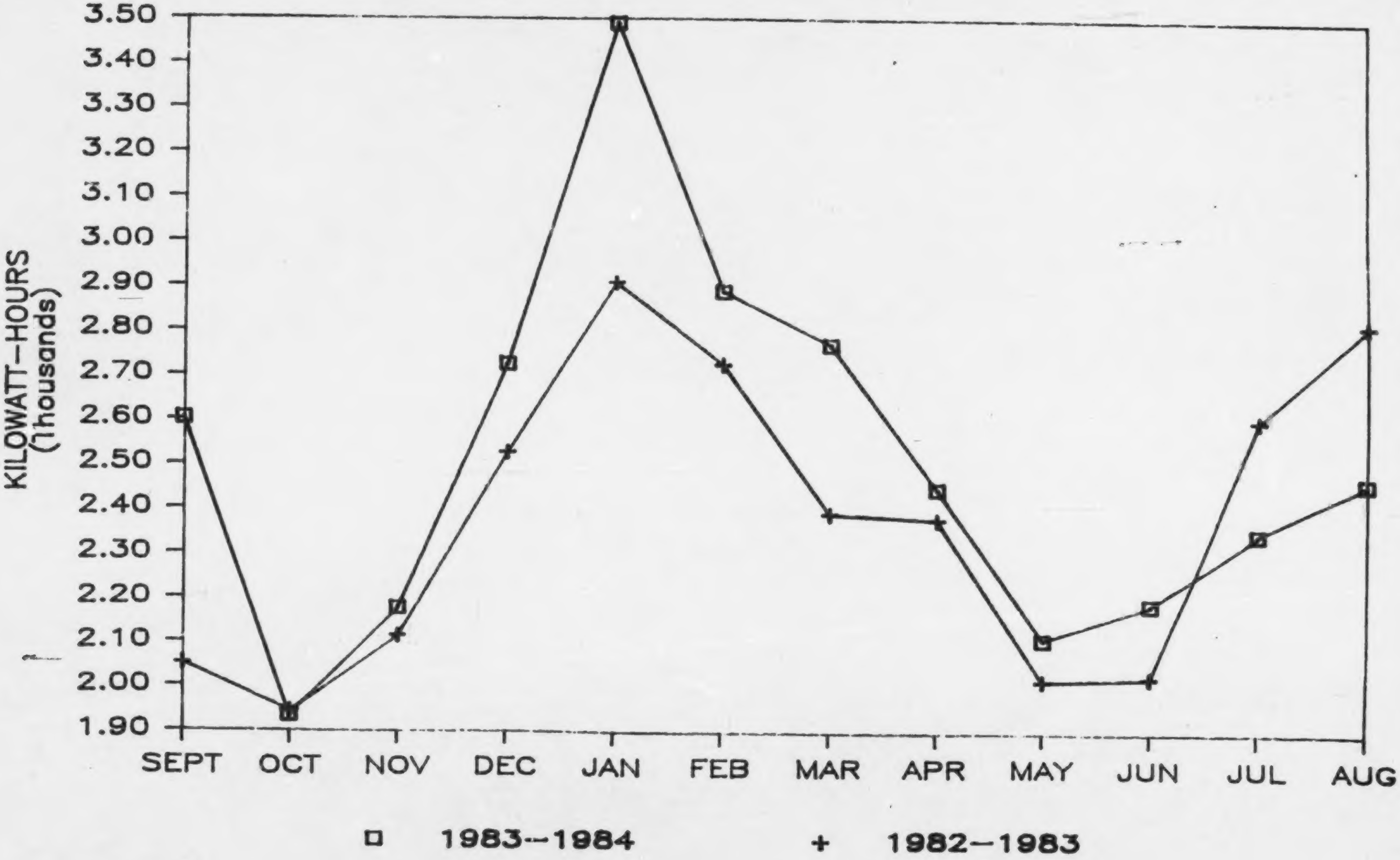


FIG. 5B. OHIO COMMERCIAL SECTOR ELECTRICITY CONSUMPTION
(1982 - 1983 VS. 1983 - 1984)

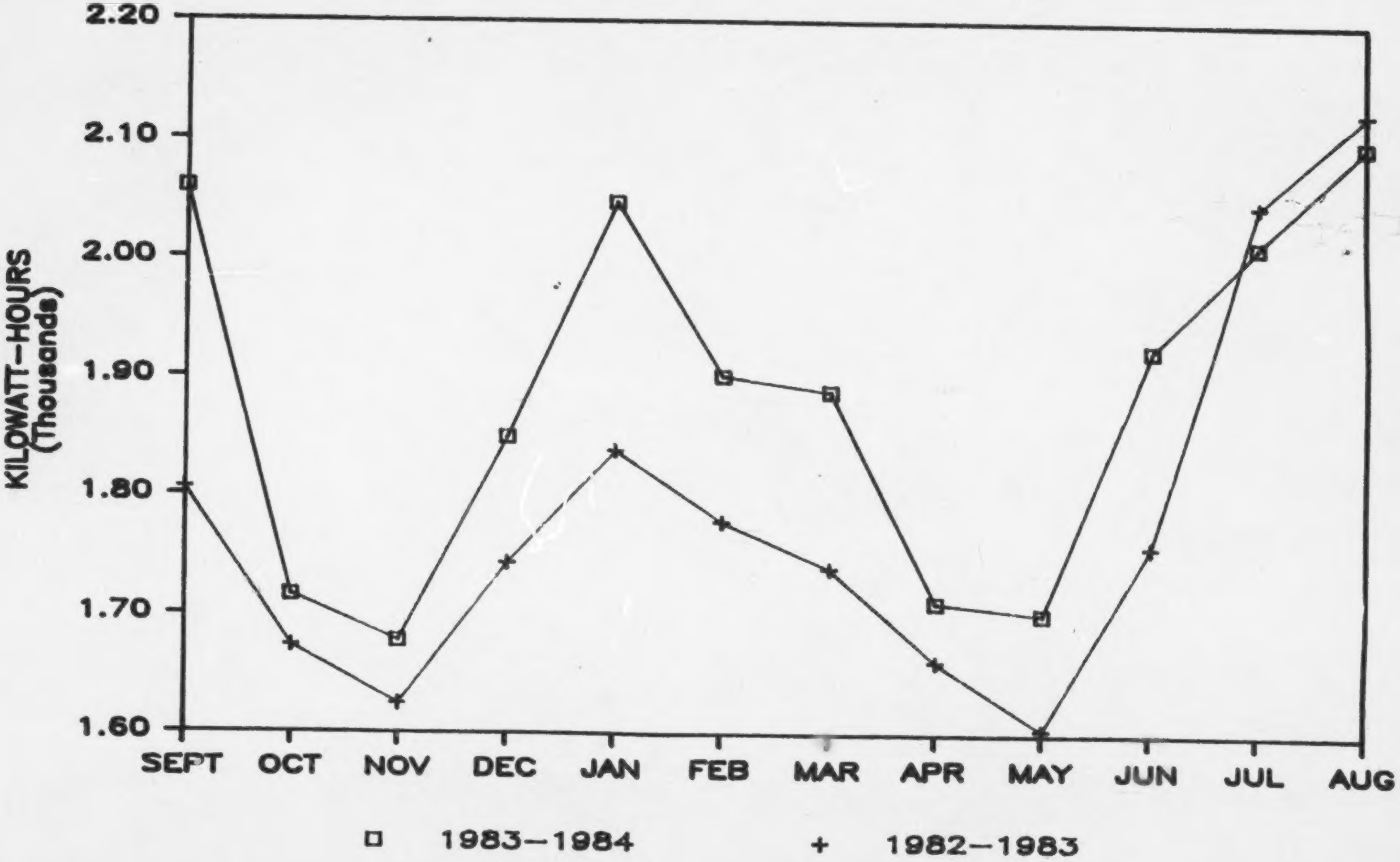


FIG. 5C. OHIO INDUSTRIAL SECTOR ELECTRICITY CONSUMPTION
(1982 - 1983 VS. 1983 - 1984)

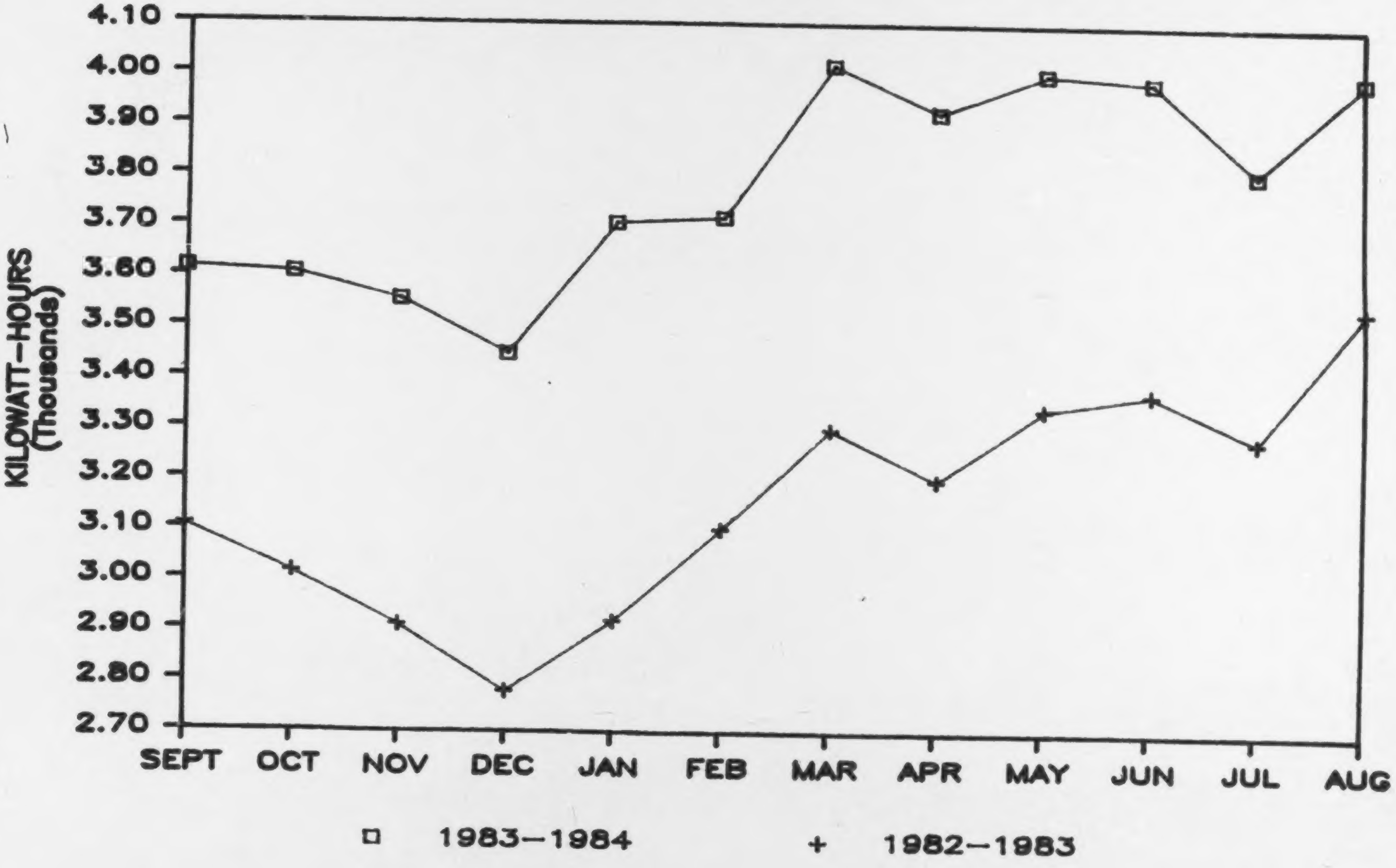


FIG 5D. TOTAL OHIO ELECTRICITY CONSUMPTION
(1982 - 1983 VS. 1983 - 1984)

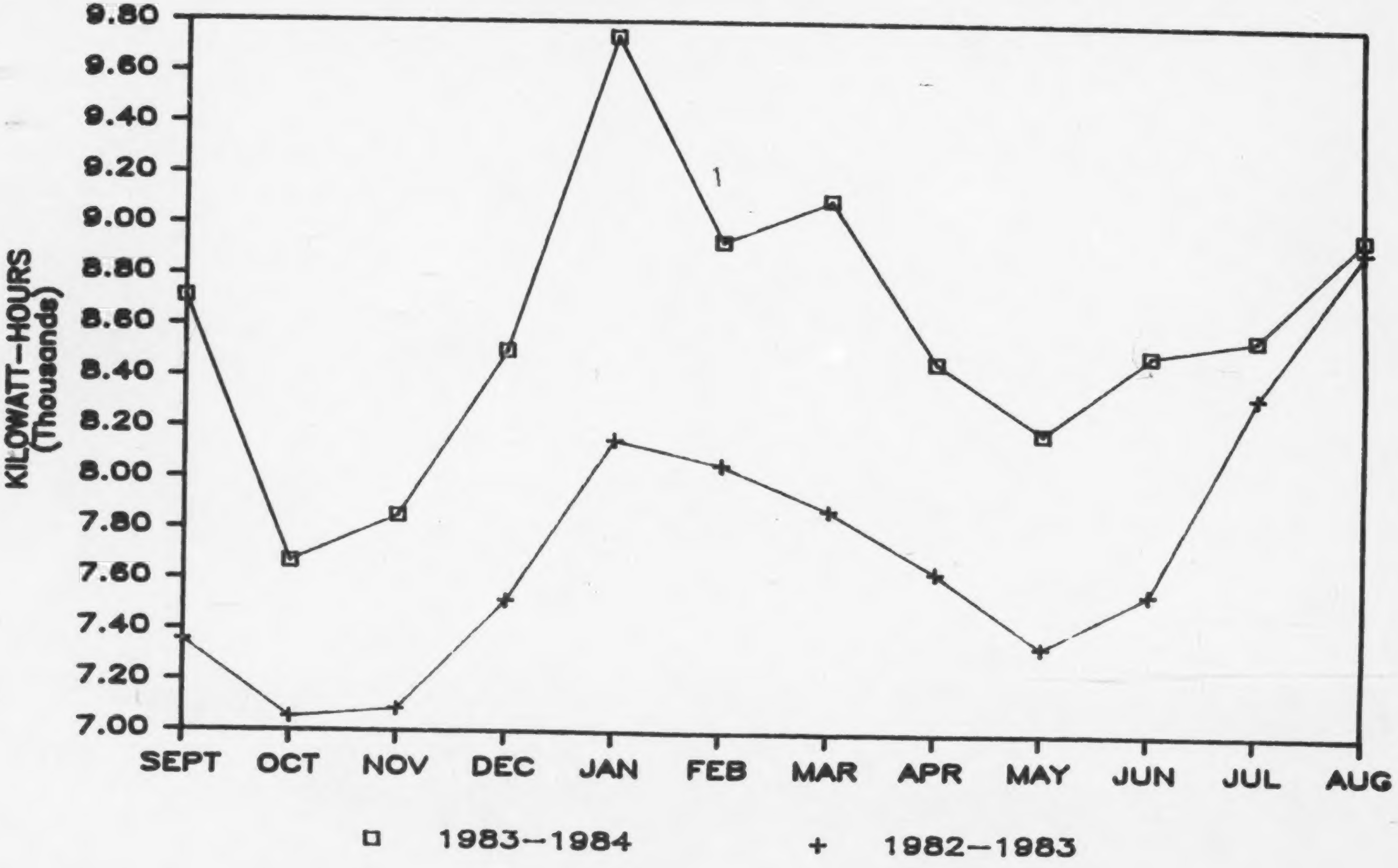


Fig. 5E Monthly Electricity Consumption

January 1971 – August 1984

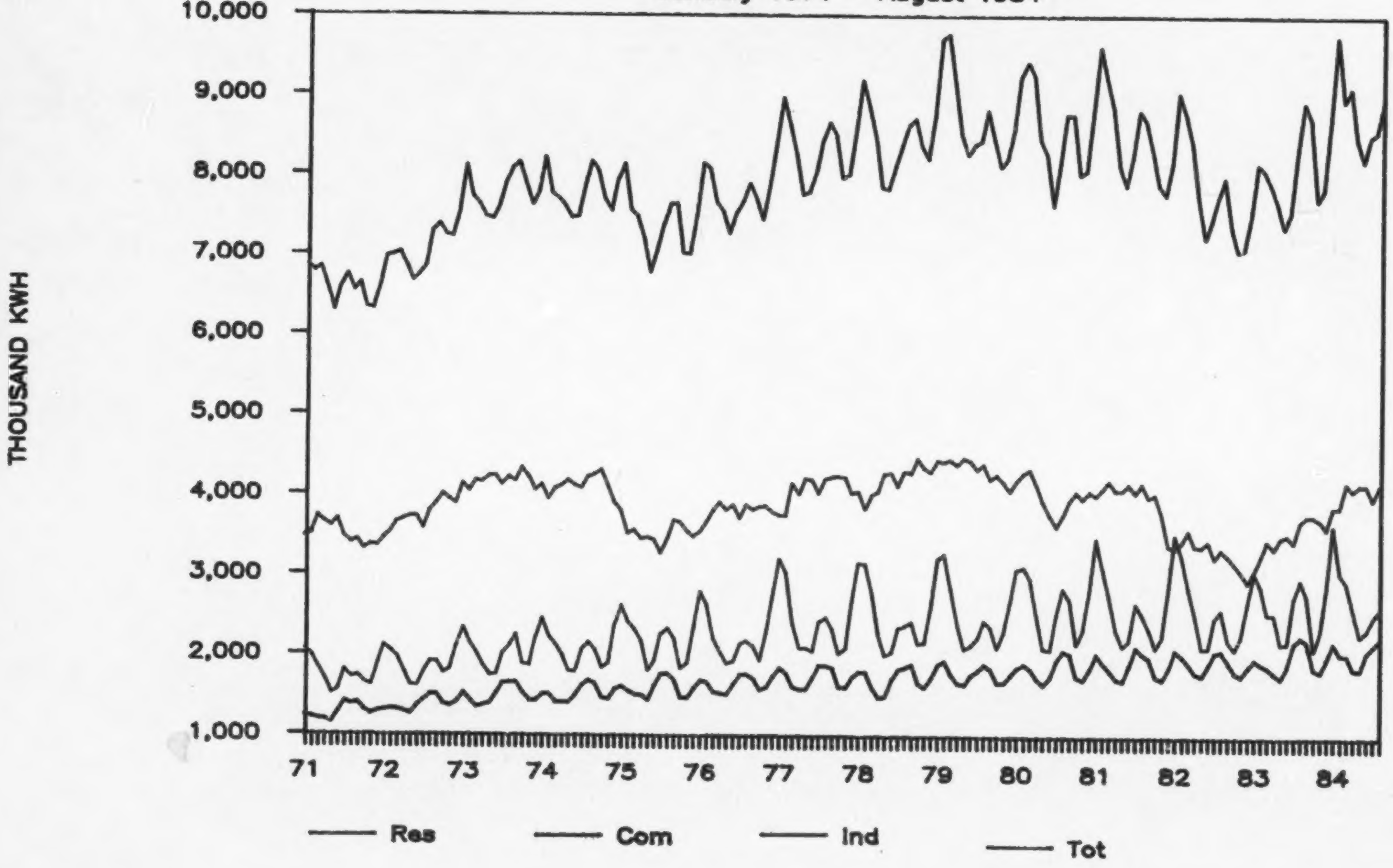


Table 7-A. Ohio Electric Utilities' Projected Deliveries, Consumption, and Stocks of Coal for Electricity Generation, 1984-1985, (1000 Short Tons)

	November	December	January	February	March	April	May	June	July	August	September	October	Total
Allegheny Power System													
Deliveries	50	1,866	1,360	1,360	1,355	1,352	1,352	1,342	1,352	1,352	1,357	1,352	15,451
Consumption	1,266	1,363	1,374	1,248	1,364	1,225	1,346	1,384	1,476	1,434	1,310	1,338	16,129
Stocks	2,493	2,995	2,981	3,093	3,083	3,211	3,217	3,175	3,051	2,969	3,016	3,030	
American Electric Power													
Deliveries	2,586	2,665	3,374	3,334	3,362	3,423	3,507	3,124	2,530	3,354	3,306	3,457	38,022
Consumption	3,560	3,931	4,336	3,791	3,740	3,233	3,226	3,272	3,535	3,574	3,453	3,492	43,143
Stocks	13,974	12,708	11,746	11,289	10,911	11,101	11,382	11,234	10,229	10,009	9,862	9,827	
Buckeye Power Inc.													
Deliveries	119	116	114	110	130	146	148	137	99	148	145	149	1,561
Consumption	173	178	180	120	128	170	173	166	134	112	163	131	1,828
Stocks	398	336	270	260	262	238	213	184	149	185	167	185	
Cincinnati Gas & Electric													
Deliveries	367	415	500	461	500	461	461	461	520	600	550	540	5,836
Consumption	476	572	575	499	551	544	497	552	605	608	537	510	6,526
Stocks	1,580	1,423	1,348	1,310	1,259	1,177	1,140	1,049	965	957	970	999	
Cleveland Electric Illuminating													
Deliveries	199	478	476	493	488	426	436	486	483	475	431	398	5,270
Consumption	449	478	476	493	488	426	436	486	483	475	431	398	5,520
Stocks	1,131	1,131	1,131	1,131	1,131	1,131	1,131	1,131	1,131	1,131	1,131	1,131	
Dayton Power and Light													
Deliveries	364	383	779	733	631	580	665	637	686	678	521	579	7,236
Consumption	641	661	763	711	613	556	642	615	665	656	525	555	7,603
Stocks	797	519	535	557	575	599	622	644	665	687	683	707	
Ohio Edison													
Deliveries	715	794	1,051	919	915	860	932	984	996	1,055	972	940	11,134
Consumption	1,009	1,111	1,180	1,000	966	926	913	997	1,118	1,046	937	983	12,187
Stocks	2,697	2,380	2,250	2,170	2,119	2,053	2,072	2,059	1,937	1,946	1,981	1,938	
Ohio Valley Electric Corp.													
Deliveries	446	446	529	478	536	579	604	589	648	652	588	586	6,679
Consumption	613	626	593	541	599	579	604	589	648	652	588	586	7,216
Stocks	1,601	1,421	1,357	1,294	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,230	
Toledo Edison													
Deliveries	141	130	188	183	171	149	143	154	167	171	162	152	1,911
Consumption	231	238	188	183	171	149	143	154	167	171	162	152	2,109
Stocks	322	216	320	320	320	320	320	320	320	320	320	320	

NOTE: NUMBERS MAY NOT SUM TO TOTAL DUE TO INDEPENDENT ROUNDING

Source: ODOE Form SE-3A.

Table 7-8. Ohio Electric Utilities' Projected Deliveries, Consumption, and Stocks of Oil for Electricity Consumption, 1984-1985 (1000 Bbls.)

	November	December	January	February	March	April	May	June	July	August	September	October	Total
Allegheny Power System													
Deliveries	0	0	0	0	0	0	0	0	0	0	0	0	0
Consumption	0	0	0	0	0	0	0	0	0	0	0	0	
Stocks	163	163	163	163	163	163	163	163	163	163	163	163	
American Electric Power System													
Deliveries	44	49	47	42	43	36	43	47	43	41	56	46	537
Consumption	44	49	47	42	43	36	43	47	43	41	56	46	537
Stocks	314	314	314	314	314	314	314	314	314	314	314	314	
Buckeye Power System													
Deliveries	2	2	2	2	2	2	2	2	2	2	2	2	20
Consumption	2	2	2	2	2	2	2	2	2	2	2	2	20
Stocks	12	12	12	12	11	11	11	11	11	11	11	11	
Cincinnati Gas and Electric													
Deliveries	10	10	10	0	10	0	10	10	10	10	10	10	100
Consumption	10	14	3	2	9	7	6	7	16	16	11	3	105
Stocks	79	75	82	80	81	74	78	81	75	69	68	75	
Cleveland Electric Illuminating													
Deliveries	27	15	16	10	6	4	8	4	4	2	3	0	99
Consumption	27	15	16	10	6	4	8	4	4	2	3	0	99
Stocks	182	182	182	182	182	182	182	182	182	182	182	182	
Dayton Power and Light													
Deliveries	1	1	0	0	67	0	0	0	2	2	39	1	113
Consumption	9	10	18	17	11	7	4	6	9	8	9	9	116
Stocks	397	388	370	354	410	403	399	393	386	380	410	402	
Ohio Edison													
Deliveries	2	3	2	1	2	0	0	2	2	1	0	0	15
Consumption	2	3	2	1	2	0	0	2	2	1	0	0	15
Stocks	39	39	39	39	39	39	39	39	39	39	39	39	
Ohio Valley Electric Cor .													
Deliveries	2	2	2	2	2	2	2	2	2	2	2	2	20
Consumption	2	2	2	2	2	2	2	2	2	2	2	2	20
Stocks	6	6	6	6	6	6	6	6	6	6	6	6	
Toledo Edison													
Deliveries	156	155	260	227	176	206	182	163	171	176	152	125	2,149
Consumption	157	157	260	227	176	206	182	163	171	176	152	125	2,152
Stocks	522	520	510	510	510	510	510	510	510	510	510	510	

Source: ODOE Form SE-3A.

TABLE 7-C Electric Utilities' Demand Forecast Fuel Assessment, and Inventory Model
(November 1984 - October 1985)

ALLEGHENY POWER SYSTEM

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	2768.0	3076.0	3243.5	2955.6	3033.4	2757.3	2650.1	2635.5	2837.3	2882.2	2722.4	2764.1	34325.3
EST DEMAND GEN BY COAL	2768.0	3076.0	3243.5	2955.6	3033.4	2757.3	2650.1	2635.5	2837.3	2882.2	2722.4	2764.1	34325.3
PROJ DAILY CONSUMPTION COAL (KTONS)	42.44	45.64	48.13	46.88	45.01	42.28	39.32	40.41	42.10	42.77	41.74	41.01	
COAL DELIVERIES (KTONS)	50.0	1865.8	1359.7	1359.7	1354.7	1352.2	1352.2	1342.2	1352.2	1352.2	1357.2	1352.2	15450.7
END OF MONTH STOCK COAL (KTONS)	2486.	2936.	2804.	2804.	2764.	2848.	2981.	3111.	3158.	3184.	3289.	3370.	
NUMBER OF DAYS SUPPLY COAL	53.	62.	61.	65.	68.	71.	72.	73.	75.	77.	80.	82.	

AMERICAN ELECTRIC POWER SYSTEM

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	7230.0	7958.0	8741.0	7982.0	7816.0	6917.0	6788.0	6893.0	7308.0	7463.0	6834.0	7068.0	88997.9
EST DEMAND GEN BY COAL	7230.0	7958.0	8741.0	7982.0	7816.0	6917.0	6788.0	6893.0	7308.0	7463.0	6834.0	7068.0	88997.9
PROJ DAILY CONSUMPTION COAL (KTONS)	112.31	119.63	131.40	128.26	117.49	107.44	102.04	107.07	109.86	112.19	106.15	106.25	
COAL DELIVERIES (KTONS)	2586.0	2665.0	3374.0	3334.0	3362.0	3423.0	3507.0	3124.0	2530.0	3354.0	3306.0	3457.0	38022.0
END OF MONTH STOCK COAL (KTONS)	14165.	13121.	12422.	12036.	11756.	11956.	12300.	12212.	11336.	11212.	11334.	11497.	
NUMBER OF DAYS SUPPLY COAL	114.	107.	108.	111.	111.	111.	113.	112.	105.	106.	107.	108.	

TABLE 7-C Electric Utilities' Demand Forecast Fuel Assessment, and Inventory Model
(November 1984 - October 1985)

CINCINNATI GAS & ELECTRIC

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	1235.5	1380.4	1464.6	1312.3	1337.8	1154.0	1251.5	1392.4	1502.8	1527.8	1279.6	1225.0	16063.
EST DEMAND GEN BY COAL	1235.5	1380.4	1464.6	1312.3	1337.8	1154.0	1251.5	1392.4	1502.8	1527.8	1279.6	1225.0	16063.
PROJ DAILY CONSUMPTION COAL (KTONS)	16.43	17.77	18.85	18.06	17.22	15.35	16.11	18.52	19.34	19.66	17.02	15.77	
COAL DELIVERIES (KTONS)	367.4	414.9	500.0	461.0	500.0	461.0	461.0	461.0	520.0	600.0	550.0	540.0	5836.
END OF MONTH STOCK COAL (KTONS)	1563.	1428.	1343.	1281.	1247.	1247.	1209.	1114.	1035.	1025.	1065.	1116.	
NUMBER OF DAYS SUPPLY COAL	86.	79.	79.	79.	76.	71.	64.	57.	56.	63.	68.	71.	

CLEVELAND ELECTRIC ILLUMINATING COMPANY

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	1496.0	1598.0	1687.0	1688.0	1633.0	1517.0	1524.0	1619.0	1678.0	1631.0	1561.0	1522.0	19154.
EST DEMAND GEN BY COAL	1496.0	1598.0	1687.0	1688.0	1633.0	1517.0	1524.0	1619.0	1678.0	1631.0	1561.0	1522.0	19154.
PROJ DAILY CONSUMPTION COAL (KTONS)	14.96	15.46	16.33	17.46	15.80	15.17	14.75	16.19	16.24	15.78	15.61	14.73	
COAL DELIVERIES (KTONS)	198.7	477.5	476.4	492.8	488.3	426.0	436.4	486.5	483.2	475.4	431.1	398.1	5270.
END OF MONTH STOCK COAL (KTONS)	1131.	1129.	1100.	1086.	1084.	1055.	1035.	1035.	1015.	1001.	964.	906.	
NUMBER OF DAYS SUPPLY COAL	70.	67.	67.	71.	72.	68.	64.	65.	65.	66.	65.	61.	

TABLE 7-C Electric Utilities' Demand Forecast Fuel Assessment, and Inventory Model (November 1984 - October 1985)

DAYTON POWER & LIGHT

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	914.0	1028.3	1160.6	1031.6	1031.6	893.5	893.5	920.6	1008.6	979.8	893.3	938.0	11693.
EST DEMAND GEN BY COAL	914.0	1028.3	1160.6	1031.6	1031.6	893.5	893.5	920.6	1008.6	979.8	893.3	938.0	11693.
PROJ DAILY CONSUMPTION COAL (KTONS)	13.95	15.19	17.14	16.29	15.23	13.64	13.20	14.05	14.89	14.47	13.63	13.85	
COAL DELIVERIES (KTONS)	364.0	383.0	779.0	733.0	631.0	580.0	665.0	637.0	686.0	678.0	521.0	579.0	7236.
END OF MONTH STOCK COAL (KTONS)	1020.	932.	1179.	1440.	1599.	1770.	2026.	2241.	2466.	2695.	2807.	2957.	
NUMBER OF DAYS SUPPLY COAL	63.	56.	77.	103.	115.	125.	143.	159.	177.	195.	203.	213.	

OHIO EDISON SYSTEM

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	1943.5	2104.0	2264.9	2054.6	2092.3	1879.5	1869.9	1935.9	2060.8	2104.4	1919.2	2015.3	24244.
EST DEMAND GEN BY COAL	1943.5	2104.0	2264.9	2054.6	2092.3	1879.5	1869.9	1935.9	2060.8	2104.4	1919.2	2015.3	24244.
PROJ DAILY CONSUMPTION COAL (KTONS)	31.61	33.12	35.65	34.57	32.94	30.57	29.44	31.49	32.44	33.13	31.22	31.72	
COAL DELIVERIES (KTONS)	1009.2	1111.0	1180.2	999.8	965.6	925.8	913.2	997.4	1117.6	1046.4	937.2	983.2	12186.
END OF MONTH STOCK COAL (KTONS)	3052.	3136.	3211.	3208.	3153.	3162.	3162.	3215.	3327.	3346.	3347.	3347.	
NUMBER OF DAYS SUPPLY COAL	89.	91.	99.	103.	103.	101.	98.	100.	104.	106.	106.	105.	

TABLE 7-C Electric Utilities' Demand Forecast Fuel Assessment, and Inventory Model
(November 1984 - October 1985)

OHIO VALLEY ELECTRIC CORPORATION

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	1455.6	1492.1	1418.5	1289.8	1436.5	1379.0	1418.6	1372.4	1480.7	1480.7	1344.3	1380.3	16948.6
EST DEMAND GEN BY COAL	1455.6	1492.1	1418.5	1289.8	1436.5	1379.0	1418.6	1372.4	1480.7	1480.7	1344.3	1380.3	16948.6
PROJ DAILY CONSUMPTION COAL (KTONS)	20.38	20.22	19.22	18.68	19.46	19.31	19.22	19.21	20.06	20.06	18.82	18.70	
COAL DELIVERIES (KTONS)	446.0	446.0	529.0	477.7	535.7	578.5	604.2	588.5	647.6	652.0	587.8	585.9	6678.8
END OF MONTH STOCK COAL (KTONS)	1602.	1421.	1355.	1291.	1223.	1222.	1231.	1243.	1268.	1299.	1322.	1328.	
NUMBER OF DAYS SUPPLY COAL	82.	75.	71.	67.	63.	63.	63.	62.	65.	69.	71.	71.	

TOLEDO EDISON

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	626.8	670.9	771.5	734.2	724.7	637.3	615.9	641.6	676.8	693.8	662.8	625.5	8081.
EST DEMAND GEN BY COAL	626.8	662.8	533.9	518.3	485.5	406.0	376.9	413.2	440.6	457.9	434.1	386.6	5742.
EST DEMAND GEN BY NUC	0.0	8.1	237.6	215.9	239.2	230.7	239.0	228.4	236.2	235.9	228.7	238.9	2338.
PROJ DAILY CONSUMPTION COAL (KTONS)	7.65	7.83	6.30	6.54	5.73	4.95	4.45	5.04	5.20	5.41	5.30	4.56	
COAL DELIVERIES (KTONS)	141.0	130.0	188.0	183.0	171.0	149.0	143.0	154.0	167.0	171.0	162.0	152.0	1911.
END OF MONTH STOCK COAL (KTONS)	324.	211.	204.	197.	190.	191.	196.	198.	204.	208.	211.	221.	
NUMBER OF DAYS SUPPLY COAL	44.	33.	31.	35	39.	41.	39.	38.	38.	41.	46.	48.	

III. NATURAL GAS

Natural gas distribution companies operating in Ohio are classified into two categories with respect to their reporting requirements. Eight major companies, Cincinnati Gas and Electric, Columbia Gas of Ohio, Dayton Power and Light, East Ohio Gas, National Gas and Oil, Ohio Gas, River Gas, and West Ohio Gas, report to ODOE every month. Eighteen small utilities and two municipal utilities report twice a year. This section is based upon the most recent reports of these utilities.

Distribution and Supplies

Distribution: Service shares of the gas distribution companies operating in Ohio are presented in Table 8 for the annual period September 1983 to August 1984. During this period, the four large distribution companies--Cincinnati Gas and Electric, Columbia Gas of Ohio, Dayton Power and Light, and East Ohio Gas--jointly distributed 92.80 percent of the reported natural gas requirements of the state. The four intermediate-sized companies--National Gas and Oil, Ohio Gas, River Gas, and West Ohio Gas--distributed an additional 5.26 percent. The remaining 1.94 percent of the reported natural gas requirements were distributed by 18 small utilities and two municipal utilities. The figures presented in Table 8 do not include self-help natural gas, which is gas directly procured by industrial customers for their own use. Self-help and other gas marketing programs are discussed beginning on page 40 of this report. Total requirements of 741,201 MMCF reported in Table 8 represent a decrease of approximately 1 percent in the distribution of natural gas compared to the same period last year.

The behavior of monthly sectoral requirements between September 1983 and August 1984 versus the preceding annual period are comparatively presented in figures 7-A through 7-D. Figure 7E is a comparison of the monthly requirements for each sector, from January 1970 to August 1984.

Sources of Supply: The major sources of natural gas supplies to the state of Ohio are presented in Table 9, and the quantities supplied are shown graphically in Figure 6. From September 1983 through August 1984, the eight major gas distribution companies of Ohio, which together account for 98.11 percent of the reported natural gas distribution in the state, procured 781,511 MMCF of natural gas to meet Ohio's requirements. This represents an 8.2 percent increase in the supplies of natural gas to Ohio compared to the same period in the previous twelve months.

Of the 781,511 MMCF total procurement, interstate gas purchases and synthetic natural gas (SNG) comprise 92.13 percent (See Table 9). Purchases of Ohio gas comprise the remaining 7.87 percent of the total. The 61,468 MMCF of Ohio production of natural gas purchased by the eight major gas utilities from September 1983 to August 1984 represents a 2.2 percent increase in their purchases of Ohio's product during the preceding annual period. This amount corresponds to approximately 40.6 percent of the state's total production of 151,300 MMCF in calendar year 1983.

Domestic interstate gas is the major source of supply for Ohio. Columbia Gas Transmission Corporation and Consolidated Gas Supply Corporation provided 67.2 percent of the natural gas supplied to the eight major Ohio gas distribution companies from September 1983 through August 1984.

Historical Behavior of Interstate Natural Gas Supplies: Until 1978, wellhead prices paid by interstate transmission companies to natural gas producers were under federal control. Starting in the early seventies, and especially after the OPEC oil price increase of 1973, the federally-regulated gas supply prices for interstate commerce lagged behind the unregulated prices which the product commanded at the wellhead for intrastate commerce. Consequently, there were supply shortages in the interstate natural gas markets during the heating season, whereas producing states such as Texas and Louisiann experienced an over abundance of supplies at all times.

In Ohio, which is more than 90% dependent on interstate gas, a ban was imposed upon new customer hook-ups in 1972 which remained in effect until 1978. Similarly, base allocations of lower priority industrial and commercial customers were curtailed between 1973 and 1978.

The Natural Gas Policy Act (NGPA), which became effective in 1978, deregulated some gas prices immediately, and legislated a phased decontrol of prices for many categories of natural gas by 1985. Pursuant to the passage of the NGPA, relatively unfettered increases in interstate gas prices have stimulated new and costlier gas production from deep wells, thus increasing available supplies. The same price increases have also choked off sectoral requirements. There have been no curtailments in Ohio since 1978, and none are expected in the foreseeable future.

Historical Behavior of Sectoral Gas Requirements

Annual Sectoral Requirements: Long-term trends in annual sectoral natural gas prices and sectoral natural gas requirements for Ohio are presented in Figures B-5 thru B-8. It is clear from these figures that the dynamic behavior of natural gas markets in Ohio has been characterized by increasing price trends and declining requirement trends since the early seventies.

Between 1970 and 1983, in response to a series of worldwide price shocks, including the OPEC oil price increases of 1973 and 1978, the price of natural gas in Ohio increased over eightfold in the residential and commercial sectors, and over ninefold in the industrial sector (See Table 10). These price increases far exceed the increase in the rate of inflation (See Table 11), or the rate of increase of the gross state product. Such significant and sustained increases in sectoral prices have induced significant and sustained conservation efforts among sectoral customers, which in turn have been translated into declining sectoral requirement trends.

It should be noted, however, that the declining trends in industrial sector requirements represent not only the net outcomes of price induced energy conservation and fuel switching programs, but also a permanent loss in industrial capacity, especially in the older and more energy intensive manufacturing industries of the state's economy.

Monthly Sectoral Requirements: The monthly time series behavior of residential, commercial, industrial, and total natural gas requirements in Ohio from January 1974 through August 1984, along with the Division's independent forecasts for September 1984 through October 1985 are displayed in figures B-1 through B-4. The seasonal variations in residential and commercial requirements can easily be discerned from these figures. Natural gas is the primary source of space heating in Ohio. Demand peaks in all sectors during the heating season and falls off during the cooling season. The dramatic effects of the curtailments imposed on the industrial sector during the 1976-77 heating season is clearly discernable in figure B-4.

Utility Forecasts: Consolidated Results and Twelve Month Outlook

Consolidated Results: Aggregate supply and demand projections of the eight major utilities, as presented in Table 12 and Figure 8, indicate a 0.06 percent annual surplus of natural gas supplies over requirements. All eight utilities project supply to be approximately equal to, requirements during the 1984-85 heating season. Supply and demand projections of the individual utilities, as submitted in their "Monthly Reports of Supply and Demand of Natural Gas," are summarized in Appendix B, Table B-9.

Table 13 shows the actual aggregate monthly sectoral requirements for the eight major utilities from September 1983 through August 1984, along with the utilities' consolidated projections for the September 1984 through August 1985 period. The forecast shows decreases in demand in the three major sectors. Figure 9 is a graphic representation of the utilities' consolidated sectoral projections for the forecast period. Overall, the forecast total annual gas requirement shows an decrease of 7.8 percent relative to the same twelve month period last year.

Actual and forecast aggregate supply of natural gas by source is displayed in Table 14. Delivered product from all pipeline sources is expected to decrease 7.8 percent over the previous twelve month period. The majority of this supply, roughly 92 percent, will continue to come from out-of-state sources. Columbia Gas Transmission Corporation by far the largest supplier to the state, is projected to supply 42.0 percent of natural gas demand.

Twelve Month Outlook: On the basis of the utilities' natural gas supply and sectoral requirement projections, the outlook for the next twelve months indicates no supply shortages, under both normal and 10 percent colder than normal weather conditions, in Ohio.

The Ohio Division of Energy will be monitoring developments in the supplies and requirements of natural gas throughout the rest of the year and will take appropriate action if a critical situation develops. However, Ohio Division of Energy's current conclusion is that prevailing conditions portend no shortages or curtailments of natural gas during the 1984-85 heating season.

Ohio Division of Energy Independent Forecast

Methodology

The independent natural gas demand forecasts prepared by Ohio Division of Energy for the eight major gas utilities serving Ohio are based upon time series analyses of sectoral requirements for each individual month of the year, between January 1970 and August 1984, adjusted for long-term annual trends, severe climatic conditions, and the business cycle.

Time series models, with adjustments, yield projections that possess better statistical properties, and are at least as accurate as alternative short-term forecasting techniques. They also offer the added flexibility of being able to produce updated forecasts which reflect and incorporate specific assumptions pertaining to the prevailing climatic and economic conditions every time the most recent actual monthly requirements are reported to Ohio Division of Energy. The utilization of an adjusted time series methodology is designed to provide a double check, thus reducing forecasting error for a more accurate and decisive diagnosis of energy requirements of the state.

Special Assumptions

We expect the relatively strong economic recovery experienced by the state to stabilize through out the forecasting horizon, with the unemployment rate fluctuating between 8.0 to 9.5 percent. Although this would ordinarily tend to increase industrial requirements, the Division of Energy anticipates that increasing natural gas prices, as the final phase of NGPA goes into effect on January 1, 1985, shall keep industrial requirements at or slightly below current levels.

Results

The results obtained on the basis of ODOE's independent forecast of sectoral requirements and the utilities' forecasts of supplies are presented in Tables 15 and 17-20, for the 1984-85 heating season. Summary results presented in Table 15 indicate a potential deficiency of 8.9 percent in the case of a 10 percent colder than normal winter. Given the availability of interstate gas supplies and the current storage capacities of Ohio utilities, no actual deficiencies or curtailments are expected.

The deficiencies indicated in Tables 15 and 17-20 arise, in the first place, from the low supply projections made by Ohio utilities. Clearly, such low projections do not reflect anticipated natural gas supply shortages in the next 12 months. They may reflect anticipated substantial declines in sectoral requirements in response to anticipated substantial increases in sectoral natural gas prices, as the final phase of NGPA price decontrols go into effect on January 1, 1985. The differences between the Division's forecast of sectoral requirements and the utilities forecasts of sectoral requirements seem to arise, therefore, from different assumptions pertaining to the magnitudes of the anticipated price increases during the forecasting horizon.

ODOE's independent forecasts for the four major utilities are compared with each company's forecast for the period from November 1984 through October 1985 in Appendix B, Tables B-1 through B-4. The Division's forecasts of sectoral end-use gas requirements for Ohio are presented in Appendix B, Tables B-5 through B-8. These have been adjusted for the long-term historical trends observed in sectoral natural gas requirements in the State. Finally, for comparison, Appendix B, Table B-9 displays twelve month forecasts produced monthly by each utility and reported to the Ohio Division of Energy.

Outlook

Any unexpected changes in the short-term behavior of residential and commercial requirements would mainly be associated with variations in the severity of the heating season, and alterations in the long-term trends followed by natural gas prices. Given conservation efforts and increasing supplies of natural gas, dramatic changes in the long-term trends followed by residential and commercial natural gas requirements and prices are not anticipated in the near future.

In recent years, the industrial sales of natural gas by utilities have decreased substantially. Part of this has been due to conservation, fuel switching and declining industrial activity in the basic industries. An increasing portion of this decline has also been the result of self-help programs administered by the PUCO and fuel oil displacement and special marketing programs administered by the Federal Energy Regulatory Commission (FERC).

The State of Ohio initiated a self-help program in 1974 to assist industrial consumers whose tariff supplies of natural gas were threatened with curtailment. The program permits industrial concerns to purchase their own gas at the wellhead and have it transported directly to their location by a gas distribution company. Throughout the mid and late 1970s, industrial consumers paid unregulated prices to producers and contracted for delivery with the gas distribution companies, which changed a fee for transmission and were permitted receipt of up to 25% of the gas for their own customers. As a result of the current surplus of natural gas, the Public Utilities Commission of Ohio has moved to amend self-help rules to rescind distribution company privileges to acquire ownership shares of self-help gas.

The rapid rise in natural gas prices has replaced potential curtailment as the incentive for Ohio industry's participation in the state's self-help program. In 1983, 20% of industrial gas requirements were met with self-help gas deliveries. This percentage would have been even higher, had a lack of transmission capability not constrained the ability of the gas distribution companies to deliver self-help gas. Under such conditions, self-help deliveries are subject to curtailment according to PUCO rules.

Self-help gas has emerged as a resource vital to the economic development of Ohio. Its cost advantage improves the competitive positions of participating industries. Ohio's gas distribution companies and their customers receive the benefits of PUCO regulated transportation changes. Finally, self-help gas provides an additional market for Ohio gas producers and spurs competition in wellhead and burner tip prices.

Federally regulated marketing programs have become significant in 1984 and have added to the loss of mainly industrial tariff customers. Fuel oil displacement and special marketing programs regulated by FERC, and Ohio self-help will account for over 36% of Ohio industrial gas use in 1984.

Emergency Response Capability Profile

There have been no natural gas curtailments in Ohio since 1978, and neither Ohio gas utilities nor the gas pipeline companies project any curtailments through October 1985. However, in the event of a shortage, it is anticipated that fuel-switching capability of industrial and large commercial users would be accelerated. Detailed emergency plans that describe strategies to respond to fuel supply shortfalls are on file at the Ohio Division of Energy.

Table 8: Total Natural Gas Requirements of All Commercial Utilities in Ohio, September 1983 through August 1984

	(1) Sales to All End Users	(2) Storage (In)	Total Requirement (1+2)	Percent of Total Ohio Requirement
Cincinnati Gas and Electric Co.	72303	0	72303	9.75
Columbia Gas of Ohio	218424	0	218424	29.47
Dayton Power and Light Co.	50653	0	50653	6.83
East Ohio Gas Co.	282484	64045	346529	46.75
National Gas and Oil Co.	14676	1100	15776	2.13
Ohio Gas Co.	6742	30	6772	0.91
River Gas Co.	4264	0	4264	0.58
West Ohio Gas Co.	12075	0	12075	1.63
Total Eight Major Utilities	661621	65175	726796	98.06
Total Small Utilities	7221	0	7221	0.97
Municipal Utilities	7184	0	7184	0.97
TOTAL ALL UTILITIES	676026	65175	741201	100.00

Source: ODOE Form SG-2 and SG-4.

Table 9: Sources of Natural Gas Supplies to the Eight Major Gas Utilities, September 1983 through August 1984

	Supply	Percent of Total	Rank
Columbia Gas Transmission Corp.	320346	40.99	1
Consolidated Gas Supply Corp.	204936	26.22	2
Lawrenceburg Gas	34373	4.40	6
Michigan/Wisconsin Pipeline Co.	1860	0.24	10
Panhandle Eastern Pipeline Co.	46214	5.91	5
Tennessee Gas Pipeline Co.	1600	0.20	11
Texas Eastern Transmission Corp.	8126	1.04	8
Texas Gas Transmission Corp.	282	0.04	12
Green Springs (SNG) (Columbia LNG)	26044	3.33	7
Storage/Propane[1]	68874	8.81	3
Other	7388	0.95	9
Total SNG and Out-of-State	720043	92.13	
Ohio Product	61468	7.87	4
TOTAL	781511	100.00	

Note: [1] Gas in storage represents a source during the period under consideration. Figure is elevated because Cincinnati Gas and Electric maintains propane in storage for peak-sharing.

Source: Ohio Division of Energy Form SG-2

FIG. 6. Sources of Natural Gas Supply For the Eight Major Gas Utilities (September 1983 - August 1984)

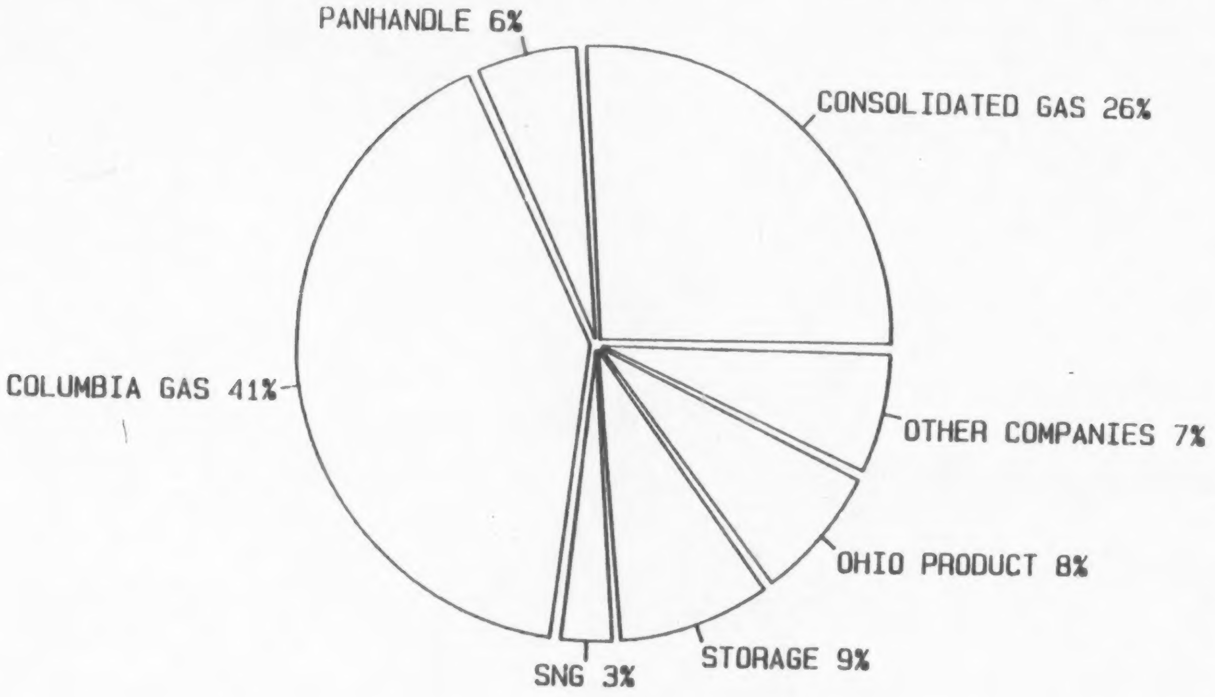


Table 10: Ohio Natural Gas Prices in Current Dollars, 1970-1983 ($ Per MMBtu)

Year	Residential	Commercial	Industrial
1970	0.84	0.73	0.52
1971	0.96	0.81	0.56
1972	1.02	0.86	0.62
1973	1.08	0.94	0.65
1974	1.23	1.07	0.85
1975	1.51	1.35	1.12
1976	1.79	1.63	1.43
1977	2.23	2.07	1.95
1978	2.43	2.24	2.05
1979	2.78	2.57	2.32
1980	3.45	3.23	2.97
1981	3.87	3.61	3.34
1982	4.80	4.53	4.20
1983	5.88	5.40	5.01

Source: American Gas Association, Gas Facts, and the Ohio Division of Energy.

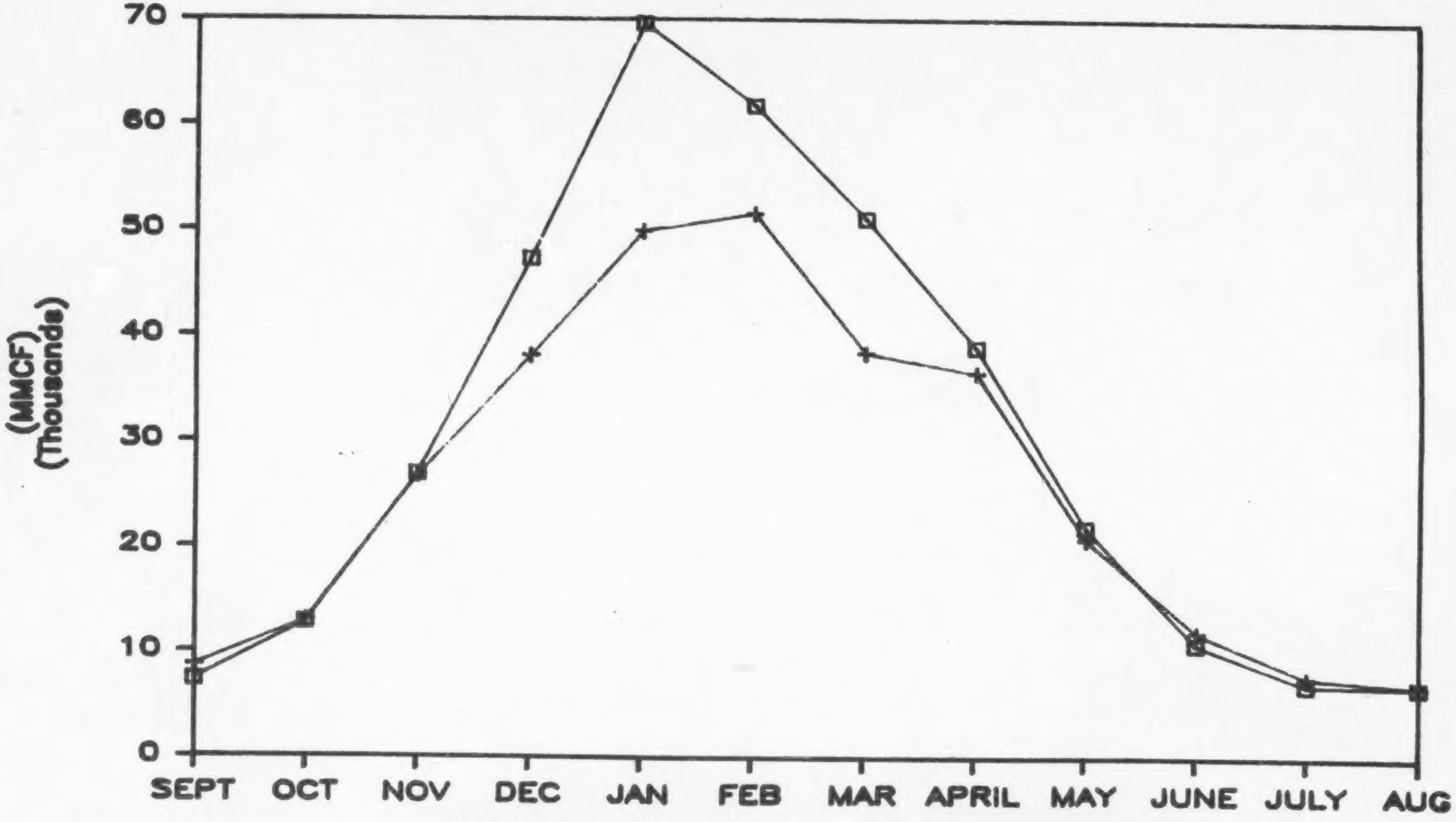
Table 11: Ohio Natural Gas Prices in Constant Dollars, 1970-1983
($ Per MMBtu)

Year	Residential	Commercial	Industrial
1970	0.72	0.63	0.45
1971	0.78	0.67	0.47
1972	0.81	0.69	0.49
1973	0.81	0.71	0.46
1974	0.83	0.72	0.58
1975	0.94	0.84	0.69
1976	1.05	0.96	0.84
1977	1.23	1.14	1.07
1978	1.24	1.15	1.05
1979	1.28	1.18	1.07
1980	1.40	1.31	1.20
1981	1.42	1.34	1.25
1982	1.66	1.57	1.45
1983	1.84	1.69	1.57

Note: All prices are stated in terms of 1967 dollars.

Source: American Gas Association, Gas Facts, 1983, U.S. Department of Commerce, "Survey of Current Business", April 1982, and the Ohio Division of Energy.

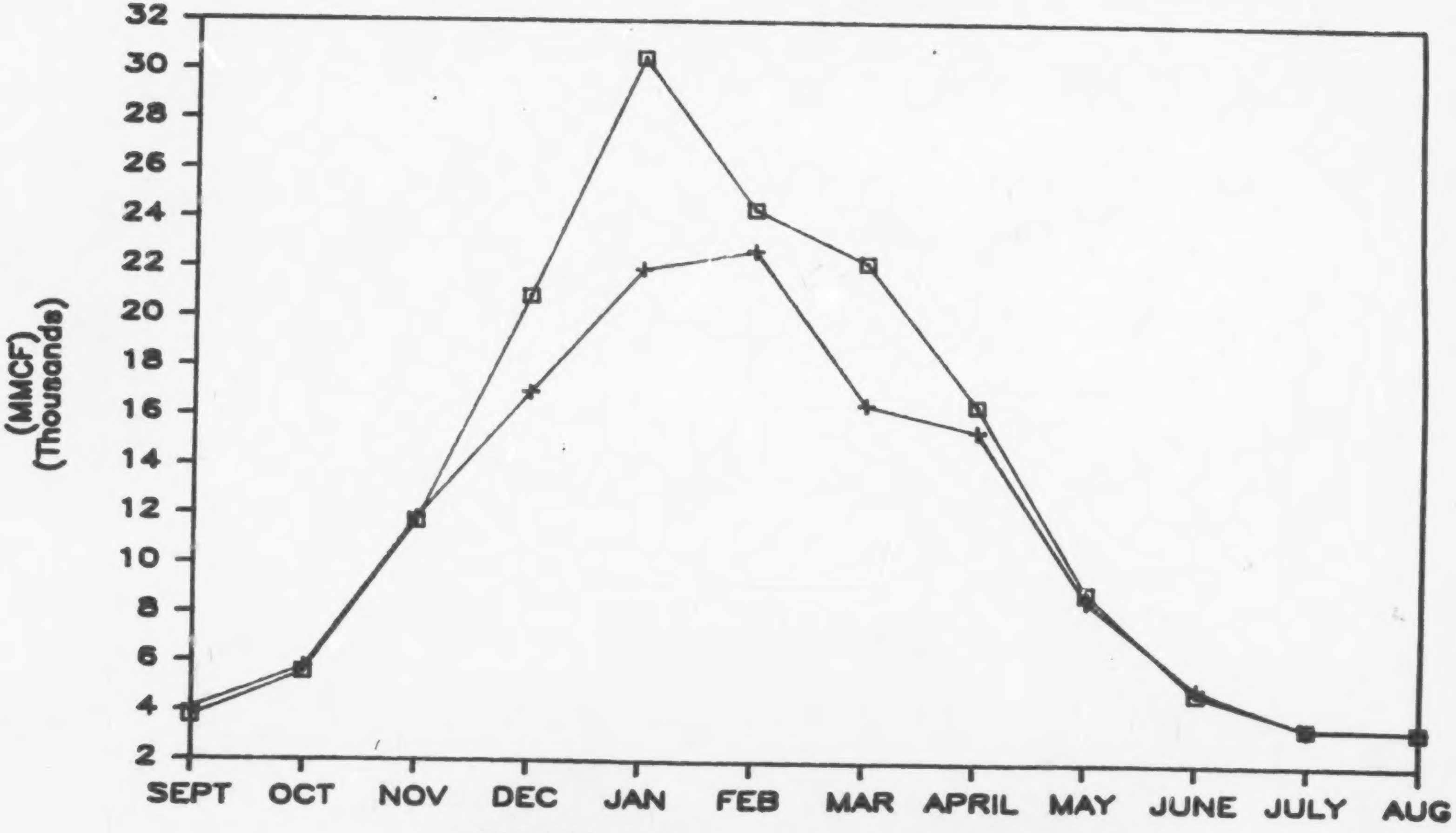
FIG. 7A. OHIO RESIDENTIAL SECTOR NATURAL GAS CONSUMPTION
1982 - 1983 VS. 1983 - 1984



SOURCE: THE OHIO DIVISION OF ENERGY

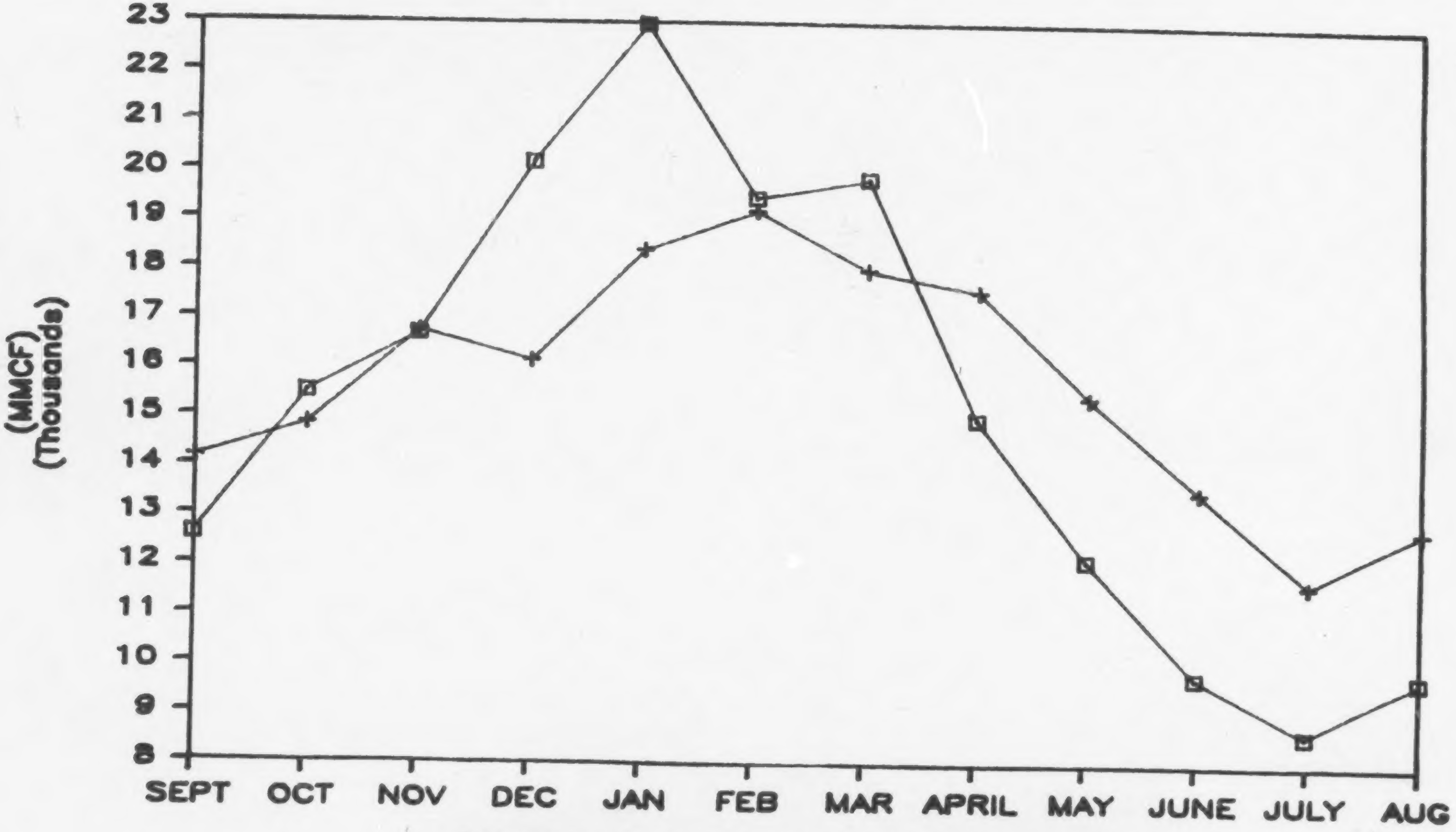
□ 1983—1984 + 1982—1983

FIG. 7B. OHIO COMMERCIAL SECTOR NATURAL GAS CONSUMPTION
1982 - 1983 VS. 1983 - 1984



SOURCE: THE OHIO DIVISION OF ENERGY
□ 1983–1984 + 1982–1983

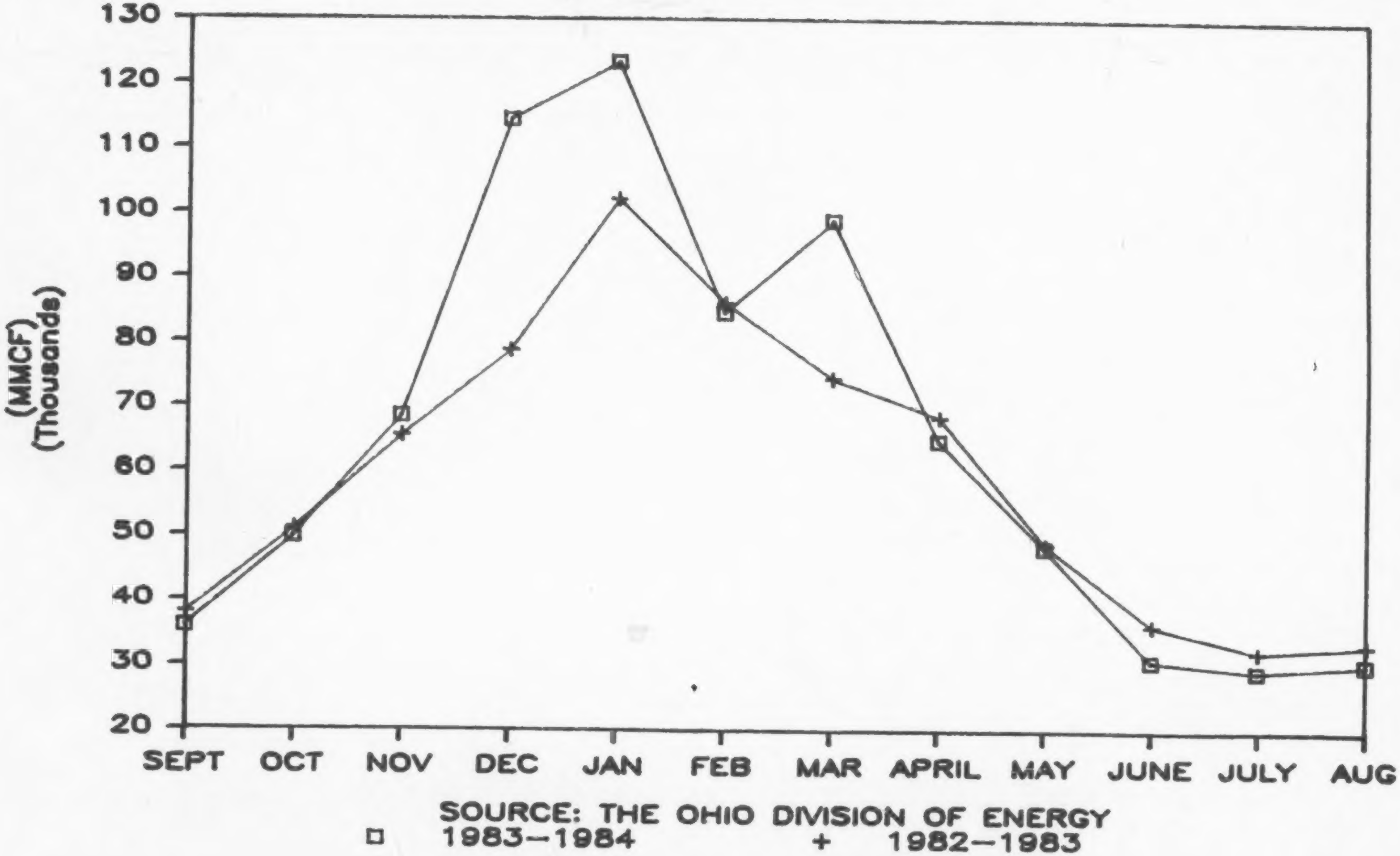
FIG. 7C. OHIO INDUSTRIAL SECTOR NATURAL GAS CONSUMPTION
1982 - 1983 VS. 1983 - 1984



SOURCE: THE OHIO DIVISION OF ENERGY

□ 1983–1984 + 1982–1983

FIG. 7D. TOTAL OHIO NATURAL GAS CONSUMPTION
1982 - 1983 VS. 1983 - 1984



SOURCE: THE OHIO DIVISION OF ENERGY

Fig. 7E Monthly Gas Consumption

January 1970 – August 1984

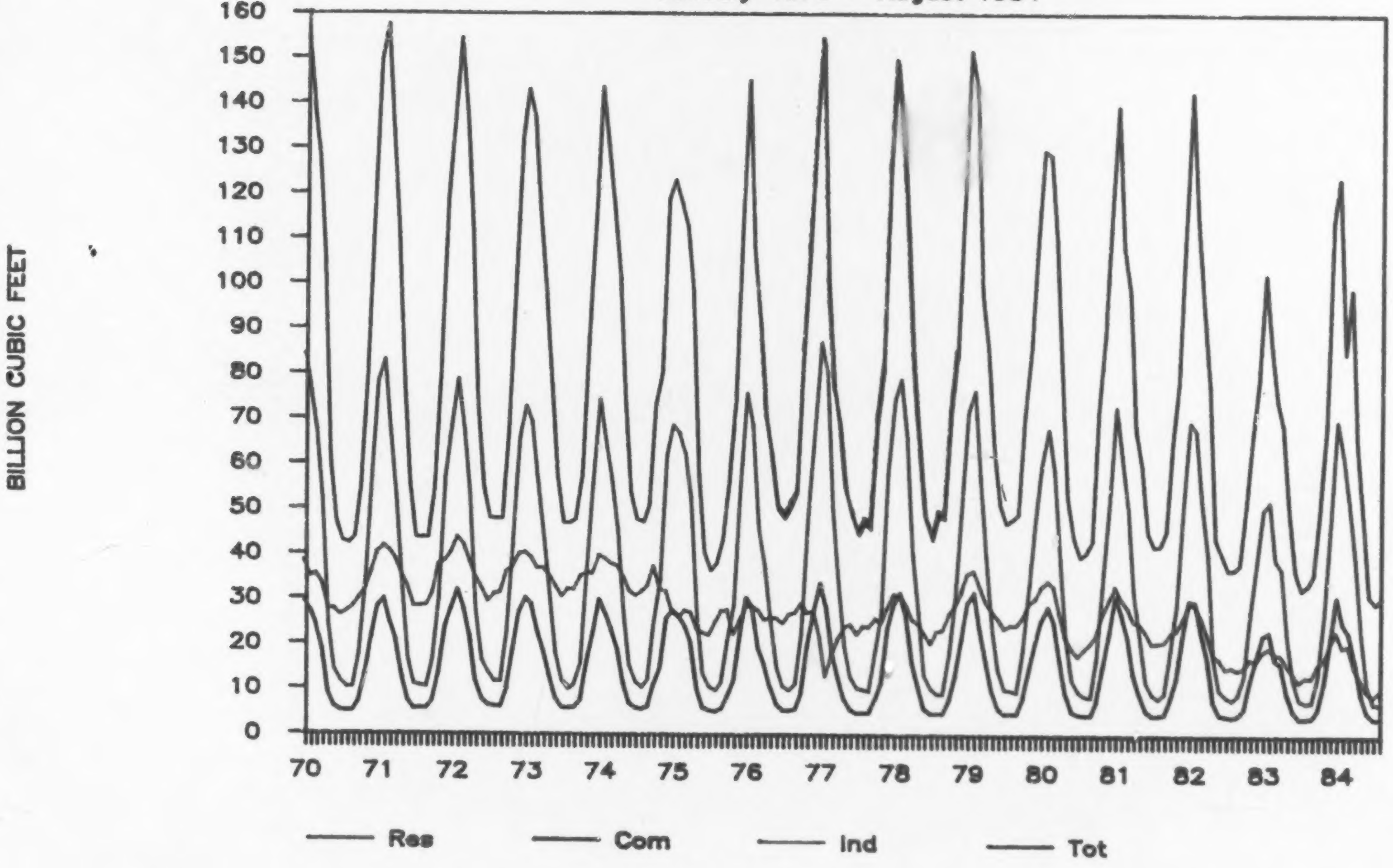


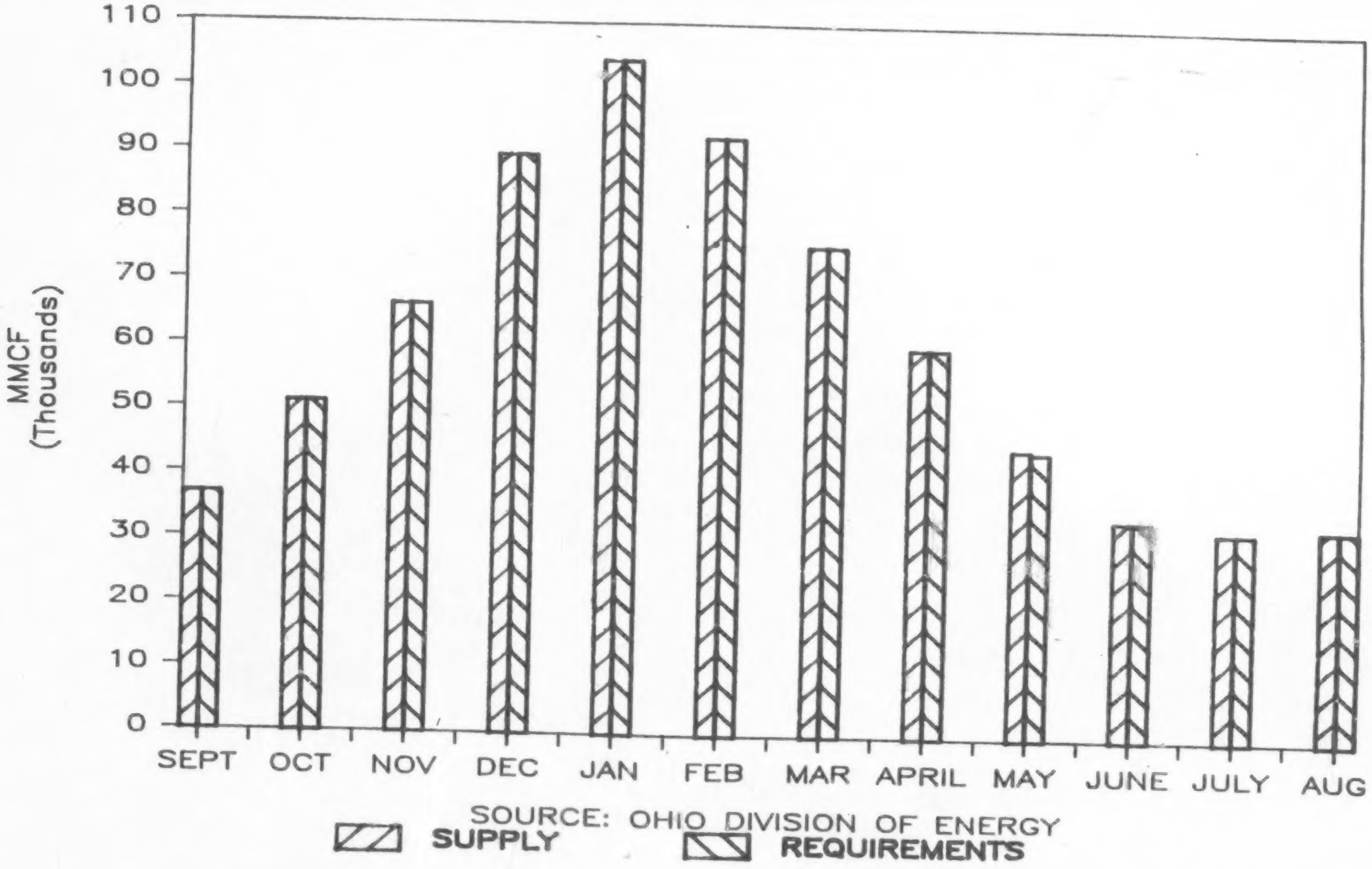
Table 12. Projected Aggregate Supply and Requirements for Natural Gas for Eight Major Utilities
September 1984 - August 1985
(MMCF)

	Supply	Demand	Deficiency	Percent Deficiency
SEPTEMBER	36884	36884	0	0.00
OCTOBER	51163	51163	0	0.00
NOVEMBER	66438	66438	0	0.00
DECEMBER	89699	89680	-19	-0.02
JANUARY	104356	104338	-18	-0.02
FEBRUARY	92443	92421	-22	-0.02
MARCH	75910	75892	-18	-0.02
APRIL	60217	60210	-7	-0.01
MAY	44780	44421	-359	-0.81
JUNE	34009	34009	0	0.00
JULY	32365	32365	0	0.00
AUGUST	33092	33092	0	0.00
TOTALS				
SUMMER	292510	292144	-366	-0.13
WINTER	428846	428769	-77	-0.02
ANNUAL	721356	720913	-443	-0.06

NOTE: A positive deficiency indicates a shortage;
A negative deficiency indicates a surplus.

SOURCE: ODOE FORM SG-1 and the OHIO DIVISION OF ENERGY

FIG 8. PROJECTED SUPPLY AND REQUIREMENTS OF NATURAL GAS BY SECTOR, TOTAL OF EIGHT MAJOR COMPANIES (SEPTEMBER 1984 - AUGUST 1985)



SOURCE: OHIO DIVISION OF ENERGY

TABLE 13 Comparison Between One Year of Actual and Forecast Demand for Eight Major Ohio Utilities by Sector (MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
9/84	87	8356	3957	12943	2958	8670	36884	0
9/83	87	7402	3767	12607	3348	8956	36080	0
	0.0%	12.9%	5.0%	2.7%	-11.6%	-3.2%	2.2%	0.0%
10/84	336	14085	6148	14568	9371	6991	51163	0
10/83	336	12896	5582	15503	9083	6933	49997	0
	0.0%	9.2%	10.1%	-6.0%	3.2%	0.8%	2.3%	0.0%
11/84	690	27185	12041	15659	11553	0	66438	0
11/83	686	26978	11725	16695	11266	2003	68668	0
	0.6%	0.8%	2.7%	-6.2%	2.5%	-100.0%	-3.2%	0.0%
12/84	1052	43221	19299	17155	10005	0	89680	-19
12/83	1028	47401	20872	20184	26128	0	114585	0
	2.3%	-8.8%	-7.5%	-15.0%	-61.7%	0.0%	-21.7%	999.9%
1/85	1141	54362	24050	18854	5746	1326	104338	-18
1/84	1124	69695	30538	22979	337	0	123549	0
	1.5%	-22.0%	-21.2%	-18.0%	1605.0%	999.9%	-15.5%	999.9%
2/85	980	52473	23573	18885	-3836	1326	92421	-22
2/84	977	61863	24405	19460	-21401	509	84756	0
	0.3%	-15.2%	-3.4%	-3.0%	82.1%	160.5%	9.0%	999.9%
3/85	823	43003	19043	17252	-3406	0	75892	-18
3/84	814	51212	22273	19863	5731	2	99081	0
	1.1%	-16.0%	-14.5%	-13.1%	-159.4%	-100.0%	-23.4%	999.9%
4/85	735	30174	13413	14876	-6236	7983	60210	-7
4/84	455	38993	16504	15009	-14399	8950	65057	0
	61.5%	-22.6%	-18.7%	-0.9%	56.7%	-10.8%	-7.5%	999.9%
5/85	202	17345	7726	12575	-3640	10417	44421	-359
5/84	196	21988	8990	12161	-4915	10301	48525	0
	3.1%	-21.1%	-14.1%	3.4%	25.9%	1.1%	-8.5%	999.9%
6/85	30	9491	4439	11890	-1707	9896	34009	0
6/84	29	10876	4903	9796	-4229	9698	31044	0
	3.4%	-12.7%	-9.5%	21.4%	59.6%	2.0%	9.6%	0.0%
7/85	5	7301	3410	11120	905	9629	32365	0
7/84	5	7053	3562	8644	705	9461	29425	0
	0.0%	3.5%	-4.3%	28.6%	28.4%	1.8%	10.0%	0.0%
8/85	11	6803	3187	11885	2220	8997	33092	0
8/84	11	6924	3480	9796	1069	9477	30744	0
	0.0%	-1.7%	-8.4%	21.3%	107.7%	-5.1%	7.6%	0.0%
SUMMER TOTAL	1404	93555	42278	89857	3871	62583	292144	-366
	1117	106132	46788	83514	-9338	63776	290872	0
	25.7%	-11.9%	-9.6%	7.6%	141.5%	-1.9%	0.4%	999.9%
WINTER TOTAL	4686	220244	98006	87805	20062	2652	428769	-77
	4629	257149	109813	99181	21981	2514	490639	0
	1.2%	-14.4%	-10.8%	-11.5%	-8.7%	5.5%	-12.6%	999.9%
YEAR TOTAL	6090	313799	140284	177662	23933	65235	720913	-443
	5746	363281	156601	182695	12643	66290	781511	0
	6.0%	-13.6%	-10.4%	-2.8%	89.3%	-1.6%	-7.8%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

FIG. 9. PROJECTED REQUIREMENTS OF NATURAL GAS BY SECTOR
EIGHT MAJOR COMPANIES
(NOVEMBER 1984 - OCTOBER 1985)

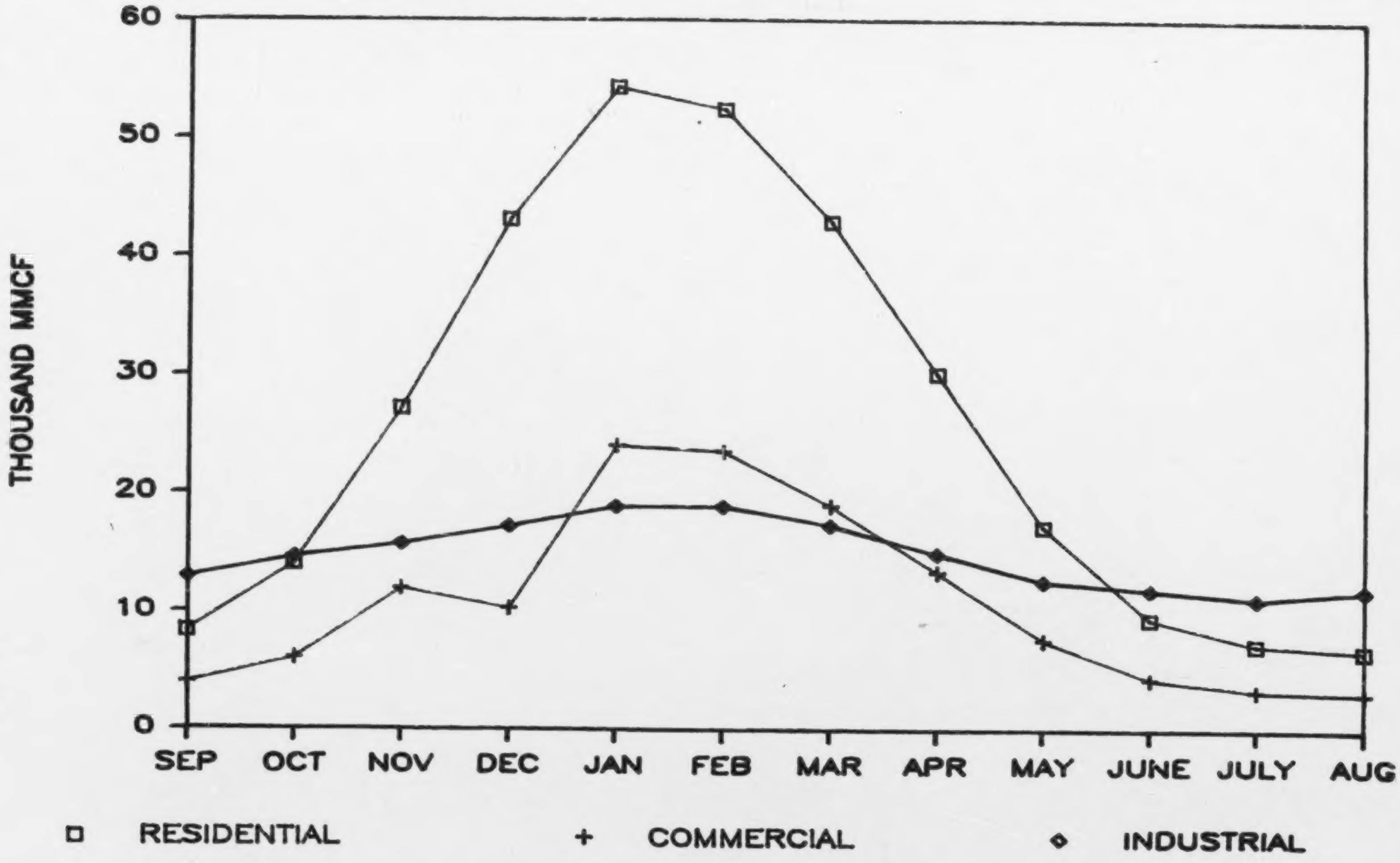


TABLE 14 Comparison Between One Year of Actual and Forecast Supply for Eight Major Ohio Gas Utilities by Source (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
9/84	11285	13007	2055	147	4296	110	600	8	0	5240	1	165	-30	36884
9/83	9404	12605	1956	76	4255	122	730	8	0	5200	1344	145	235	36080
	20.0%	3.2%	5.1%	93.4%	1.0%	-9.8%	-17.8%	0.0%	0.0%	0.8%	-99.9%	13.8%	-112.8%	2.2%
10/84	18768	18808	2364	94	4698	135	620	13	0	5290	0	170	203	51163
10/83	17358	16890	2710	88	4569	136	799	13	0	5069	1045	189	331	49997
	8.1%	11.4%	-12.8%	6.8%	2.8%	-0.7%	-22.4%	0.0%	0.0%	4.4%	-100.0%	-10.1%	-38.7%	2.3%
11/84	31468	8349	2755	104	4697	126	610	30	0	5385	1243	11365	306	66438
11/83	28186	14077	3787	89	4612	128	694	27	0	5303	2727	8648	390	68668
	11.6%	-40.7%	-27.3%	16.9%	1.8%	-1.6%	-12.1%	11.1%	0.0%	1.5%	-54.4%	31.4%	-21.5%	-3.2%
12/84	44803	14448	2884	121	5054	150	620	46	0	5360	1111	14705	397	89699
12/83	55412	19918	3881	125	5335	149	669	53	0	5321	3583	19846	293	114585
	-19.1%	-27.5%	-25.7%	-3.2%	-5.3%	0.7%	-7.3%	-13.2%	0.0%	0.7%	-69.0%	-25.9%	35.5%	-21.7%
1/85	55497	17301	3014	104	5073	150	630	49	0	5301	1111	18028	379	104356
1/84	61160	24434	4672	130	5404	160	671	55	0	4780	3829	18033	221	123549
	-9.3%	-29.2%	-35.5%	-20.0%	-6.1%	-6.3%	-6.1%	-10.9%	0.0%	10.9%	-71.0%	-0.0%	71.5%	-15.5%
2/85	46694	19672	2988	158	4576	140	570	41	0	5260	1004	10959	381	92443
2/84	39995	17184	4138	104	4620	148	557	35	0	4487	3605	9587	296	84756
	16.7%	14.5%	-27.8%	51.9%	-1.0%	-5.4%	2.3%	17.1%	0.0%	17.2%	-72.1%	14.3%	28.7%	9.1%
3/85	35591	15947	3364	276	4844	150	630	35	0	5233	1132	8719	-11	75910
3/84	47165	22163	4683	115	4900	160	649	41	0	4788	2946	10941	530	99081
	-24.5%	-28.0%	-28.2%	140.0%	-1.1%	-6.3%	-2.9%	-14.6%	0.0%	9.3%	-61.6%	-20.3%	-102.1%	-23.4%
4/85	23659	21513	2706	259	4464	150	610	21	0	5307	1006	535	-13	60217
4/84	25812	23252	3407	95	4405	151	680	21	0	4750	1265	532	687	65057
	-8.3%	-7.5%	-20.6%	172.6%	1.3%	-0.7%	-10.3%	0.0%	0.0%	11.7%	-20.5%	0.6%	-101.9%	-7.4%
5/85	13292	17362	2495	193	4449	150	630	12	0	4908	1039	230	20	44780
5/84	14786	17886	2618	270	4436	151	799	11	0	5395	1419	438	316	48525
	-10.1%	-2.9%	-4.7%	-28.5%	0.3%	-0.7%	-21.2%	9.1%	0.0%	-9.0%	-26.8%	-47.5%	-93.7%	-7.7%
6/85	7488	13022	90	149	4192	115	575	7	0	4915	1006	165	2285	34009
6/84	7743	13396	2148	267	633	69	559	6	0	4907	1171	167	-22	31044
	-3.3%	-2.8%	-95.8%	-44.2%	562.2%	66.7%	2.9%	16.7%	0.0%	0.2%	-14.1%	-1.2%	10486.4%	9.6%
7/85	5944	11722	93	127	4337	109	632	6	0	4909	1076	170	3240	32365
7/84	6879	10316	283	208	2541	112	601	6	0	5640	1149	176	1514	29425
	-13.6%	13.6%	-67.1%	-38.9%	70.7%	-2.7%	5.2%	0.0%	0.0%	-13.0%	-6.4%	-3.4%	114.0%	10.0%
8/85	6861	11671	93	98	4406	118	740	7	0	4816	1076	165	3041	33092
8/84	6446	12815	90	293	504	114	718	6	0	5828	1161	172	2597	30744
	6.4%	-8.9%	3.3%	-66.6%	774.2%	3.5%	3.1%	16.7%	0.0%	-17.4%	-7.3%	-4.1%	17.1%	7.6%
SUMMER TOTAL	87297	107105	9896	1067	30842	887	4407	74	0	35385	5204	1600	8746	292510
	88428	107160	13212	1297	21343	855	4886	71	0	36789	9354	1819	5658	290872
	-1.3%	-0.1%	-25.1%	-17.7%	44.5%	3.7%	-9.8%	4.2%	0.0%	-3.8%	-44.4%	-12.0%	54.6%	0.6%
WINTER TOTAL	214053	75717	15005	763	24244	716	3060	201	0	26539	5601	63776	1452	428846
	231918	97776	21161	563	24871	745	3240	211	0	24679	16690	67055	1730	490639
	-7.7%	-22.6%	-29.1%	35.5%	-2.5%	-3.9%	-5.6%	-4.7%	0.0%	7.5%	-66.4%	-4.9%	-16.1%	-12.6%
YEAR TOTAL	301350	182822	24901	1830	55086	1603	7467	275	0	61924	10805	65376	10198	721356
	320346	204936	34373	1860	46214	1600	8126	282	0	61468	26044	68874	7388	781511
	-5.9%	-10.8%	-27.6%	-1.6%	19.2%	0.2%	-8.1%	-2.5%	0.0%	0.7%	-58.5%	-5.1%	38.0%	-7.7%

—NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table 15: Independent Forecasts of Gas Supply and Demand for the Eight Major Ohio Gas Utilities
November 1984 - March 1985
(MMCF)

	Normal Weather			10% Colder Than Normal Weather		
	Supply	Demand	Surplus (Deficiency)	Supply	Demand	Surplus (Deficiency)
Cincinnati Gas & Electric	48,924	54,600	(5,676)	52,437	56,481	(4,044)
Columbia Gas	147,312	172,600	(25,288)	156,791	181,014	(24,223)
Dayton Power & Light	34,777	38,400	(3,623)	37,254	40,138	(2,884)
East Ohio Gas	186,083	199,200	(13,117)	197,479	208,066	(10,587)
National Gas	6,866	6,866	0	7,190	7,190	0
Ohio Gas	4,391	4,391	0	4,719	4,719	0
River Gas	2,702	2,702	0	2,856	2,856	0
West Ohio Gas	7,913	7,913	0	8,419	8,419	0
Total	438,968	486,672	(47,704)	467,145	508,883	(41,738)

Source: November 1984 ODOE Form SG-2 of reporting utilities, and the Ohio Division of Energy.

Table 16: Independent Forecast of Annual Natural Gas End Use Requirements, Calendar Year 1984 (TBTU)

	Actual 1983	Lower 95% Confidence Limit	Forecast 1985	Upper 95% Confidence Limit	Forecast % Change
Residential	319.4	343.9	382.1	420.3	19.63
Commercial	139.4	142.7	158.6	174.5	13.77
Industrial	191.7	162.2	180.2	198.2	-6.00
Other*	7.7	4.0	8.0	12.0	3.90
Total	658.2	652.8	728.9	805.0	10.74

Source: Ohio Division of Energy

*Other includes transportation and electric utilities sectors.

Table 17: Independent Forecasts of Gas Supply and Demand for Cincinnati Gas and Electric Company November 1984 - March 1985 (MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus (Deficiency)[3]
November 1984	7,116	648	7,100	16	7,636	713	7,380	256
December 1984	10,560	947	12,500	(1,940)	11,337	1,042	12,909	(1,572)
January 1985	12,195	1,119	14,200	(2,005)	13,094	1,231	14,683	(1,589)
February 1985	10,423	921	10,800	(377)	11,163	1,013	11,198	(35)
March 1985	8,630	719	10,000	(1,370)	9,207	791	10,311	(1,104)
Total	48,924		54,600	(5,676)	52,437		56,481	(4,044)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met with gas in storage.

Source: Cincinnati Gas & Electric's November ODOE Form SG-2, and the Ohio Division of Energy.

Table 18: Independent Forecasts of Gas Supply and Demand for Columbia Gas of Ohio
November 1984 - March 1985
(MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus (Deficiency)[3]
November 1984	23,349	589	25,000	(1,651)	24,432	648	26,041	(1,609)
December 1984	30,661	930	38,500	(7,839)	32,456	1,023	40,141	(7,685)
January 1985	36,345	1,192	42,500	(6,155)	38,765	1,311	44,599	(5,834)
February 1985	31,376	1,146	33,000	(1,624)	33,749	1,261	35,029	(1,280)
March 1985	25,581	908	33,600	(8,019)	27,389	999	35,205	(7,816)
Total	147,312		172,600	(25,288)	156,791		181,014	(24,223)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met with gas in storage.

Source: Columbia Gas of Ohio's November ODOE Form SG-2, and the Ohio Division of Energy.

Table 19: Independent Forecasts of Gas Supply and Demand for Dayton Power & Light Company November 1984 - March 1985 (MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus[3] (Deficiency)
November 1984	4,770	487	4,600	170	5,011	536	4,785	226
December 1984	7,068	896	7,400	(332)	7,671	986	7,740	(69)
January 1985	8,570	1,161	10,300	(1,730)	9,146	1,277	10,740	(1,594)
February 1985	8,526	1,152	9,000	(474)	9,104	1,267	9,437	(333)
March 1985	5,843	891	7,100	(1,257)	6,322	980	7,438	(1,116)
Total	34,777		38,400	(3,623)	37,254		40,138	(2,884)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met with gas in storage.

Source: Dayton Power & Light Company's November ODOE Form SG-2, and the Ohio Division of Energy

Table 20: Independent Forecasts of Gas Supply
and Demand for East Ohio Gas Company
November 1984 - March 1985
(MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus[3] (Deficiency)
November 1984	28,785	567	31,000	(2,215)	30,405	624	32,035	(1,630)
December 1984	39,055	956	44,900	(5,845)	41,528	1,052	46,645	(5,117)
January 1985	44,800	1,213	48,000	(3,200)	47,685	1,334	50,214	(2,529)
February 1985	39,414	1,176	37,500	1,914	41,824	1,294	39,646	2,178
March 1985	34,029	946	37,800	(3,771)	36,037	1,041	39,526	(3,489)
Total	186,083		199,200	(13,117)	197,479		208,066	(10,587)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met with gas in storage.

Source: East Ohio Gas Company's November ODOE Form SG-2, and the Ohio Division of Energy

APPENDIX A: ELECTRICITY

Table A-1: Allegheny Power System Forecast of Electric Energy Demand (1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	2,653	2,768	4.33	2,828	6.60
December	3,090	3,076	-0.45	3,141	1.65
January	3,204	3,243	1.22	3,329	3.90
February	2,802	2,956	5.50	2,976	6.21
March	3,051	3,033	-0.59	3,120	2.26
April	2,648	2,757	4.12	2,791	5.40
May	2,667	2,650	-0.64	2,758	3.41
June	2,662	2,636	-0.98	2,749	3.27
July	2,616	2,837	8.45	2,875	9.90
August	2,843	2,882	1.37	2,941	3.45
September	2,540	2,722	7.17	2,758	8.58
October	2,646	2,764	4.46	2,876	8.69

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-2: American Electric Power
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	6,711	7,230	7.73	7,058	5.17
December	8,051	7,958	-1.16	7,987	-0.79
January	8,290	8,741	5.44	8,387	1.17
February	7,201	7,982	10.85	7,361	2.22
March	7,904	7,816	-1.11	7,905	0.01
April	6,944	6,917	-0.39	6,951	0.10
May	6,823	6,788	-0.51	6,790	-0.48
June	7,102	6,893	-2.94	7,022	-1.13
July	7,110	7,308	2.78	7,536	5.99
August	7,801	7,463	-4.33	7,593	-2.67
September	6,564	6,834	4.11	6,752	2.86
October	6,732	7,068	4.99	6,755	0.34

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-3: Cincinnati Gas and Electric
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	1,258	1,235	-1.83	1,297	3.10
December	1,547	1,380	-10.80	1,490	-3.68
January	1,575	1,465	-6.98	1,570	-0.32
February	1,304	1,312	0.61	1,364	4.60
March	1,443	1,338	-7.28	1,410	-2.29
April	1,231	1,154	-6.26	1,259	2.27
May	1,232	1,251	1.54	1,291	4.79
June	1,461	1,392	-4.72	1,391	-4.79
July	1,433	1,503	4.88	1,644	14.72
August	1,545	1,528	-1.10	1,629	5.44
September	1,246	1,280	2.73	1,374	10.27
October	1,241	1,225	-1.29	1,293	4.19

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-4: Cleveland Electric Illuminating Company Forecast of Electric Energy Demand (1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	1,399	1,496	6.93	1,501	7.29
December	1,617	1,598	-1.18	1,651	2.10
January	1,690	1,687	-0.18	1,753	3.73
February	1,514	1,688	11.49	1,593	5.22
March	1,657	1,633	-1.45	1,688	1.87
April	1,450	1,517	4.62	1,517	4.62
May	1,495	1,524	1.94	1,501	0.40
June	1,564	1,619	3.52	1,615	3.26
July	1,498	1,678	12.02	1,699	13.42
August	1,648	1,631	-1.03	1,700	3.16
September	1,504	1,561	3.79	1,540	2.39
October	1,506	1,522	1.06	1,518	0.80

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-5: Dayton Power and Light Forecast of Electric Energy Demand (1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	882	914	3.63	911	3.29
December	1,099	1,028	-6.46	1,076	-2.09
January	1,121	1,161	3.57	1,140	1.69
February	922	1,032	11.93	949	2.93
March	1,033	1,032	-0.10	1,044	1.06
April	859	894	4.07	919	6.98
May	843	894	6.05	885	4.98
June	921	921	0.00	992	7.71
July	920	1,009	9.67	1,100	19.57
August	1,000	980	-2.00	1,096	9.60
September	841	893	6.18	935	11.18
October	881	938	6.47	919	4.31

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-6: Ohio Edison Company
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	1,968	1,944	-1.22	2,046	3.96
December	2,246	2,104	-6.32	2,209	-1.65
January	2,296	2,265	-1.35	2,328	1.39
February	2,028	2,055	1.33	2,098	3.45
March	2,247	2,092	-6.90	2,237	-0.45
April	1,954	1,880	-3.79	2,013	3.02
May	1,976	1,870	-5.36	2,012	1.82
June	2,058	1,936	-5.93	2,061	0.15
July	2,015	2,061	2.28	2,206	9.48
August	2,175	2,104	-3.26	2,224	2.25
September	1,871	1,919	2.57	2,051	9.62
October	1,949	2,015	3.39	2,089	7.18

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-7: Ohio Valley Electric Corporation
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual
November	1,311	1,456	11.06
December	1,477	1,492	1.02
January	1,381	1,418	2.68
February	1,181	1,290	9.23
March	1,403	1,437	2.42
April	1,339	1,379	2.99
May	1,380	1,419	2.83
June	1,389	1,372	-1.22
July	950	1,481	55.89
August	953	1,481	55.40
September	932	1,344	44.21
October	1,054	1,380	30.93

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-8: Toledo Edison Company
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	638	627	-1.72	649	1.72
December	743	671	-9.69	708	-4.71
January	756	772	2.12	753	-0.40
February	644	734	13.98	664	3.11
March	724	725	0.14	706	-2.49
April	620	637	2.74	629	1.45
May	619	616	-0.48	628	1.45
June	658	642	-2.43	644	-2.13
July	656	679	3.51	696	6.10
August	704	694	-1.42	704	0.00
September	599	663	10.68	642	7.18
October	626	626	0.00	650	3.83

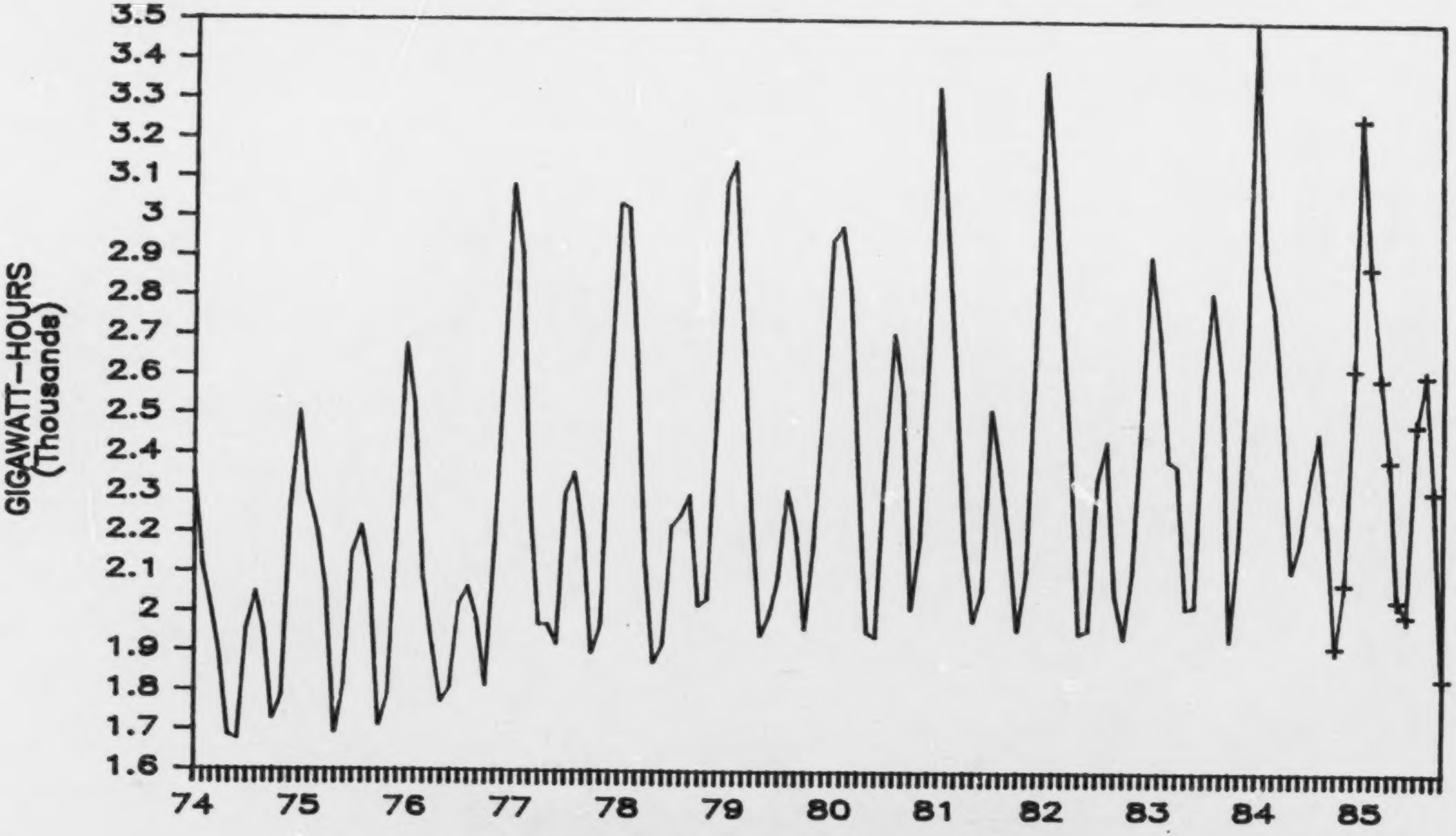
Source: Form EIA-119M and the Ohio Division of Energy.

Table A-9: Independent Forecast of Ohio Electricity Demand
Residential Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
November	1,591	2,080	2,569	2,178	-4.5
December	2,118	2,624	3,131	2,727	-3.8
January	2,734	3,257	3,779	3,492	-6.7
February	2,340	2,879	3,417	2,891	-0.4
March	2,044	2,598	3,152	2,771	-6.2
April	1,822	2,392	2,961	2,448	-2.3
May	1,419	2,038	2,658	2,111	-3.5
June	1,331	2,000	2,663	2,190	-8.7
July	1,797	2,484	3,170	2,350	5.7
August	1,912	2,608	3,303	2,466	5.8
September	1,609	2,313	3,017	2,230	3.7
October	1,127	1,840	2,553		

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

FIG. A-1. MONTHLY OHIO RESIDENTIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - OCTOBER 1985)



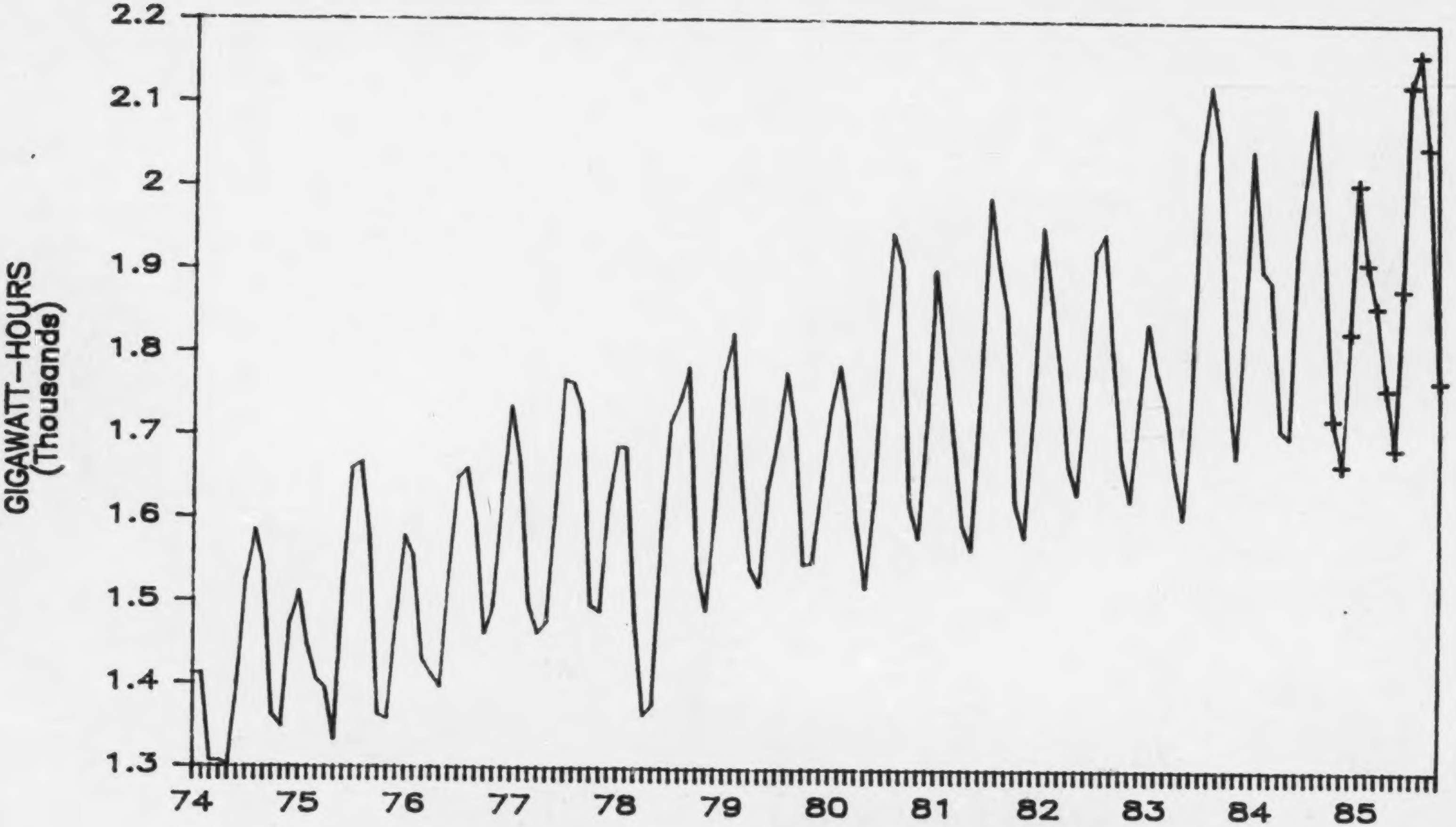
SOURCE: OHIO ELECTRIC UTILITY INSTITUTE

Table A-10: Independent Forecast of Ohio Electricity Demand Commercial Sector (1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
November	1,492	1,669	1,847	1,678	-0.5
December	1,646	1,829	2,012	1,850	-1.1
January	1,820	2,008	2,195	2,048	-2.0
February	1,720	1,912	2,104	1,902	0.5
March	1,663	1,859	2,055	1,889	-1.6
April	1,560	1,761	1,961	1,711	2.9
May	1,472	1,689	1,907	1,702	-0.8
June	1,648	1,881	2,114	1,924	-2.2
July	1,890	2,127	2,364	2,013	5.7
August	1,925	2,163	2,401	2,099	3.0
September	1,813	2,052	2,291	1,944	5.6
October	1,530	1,770	2,010		

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

FIG. A-2. MONTHLY OHIO COMMERCIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - OCTOBER 1985)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE

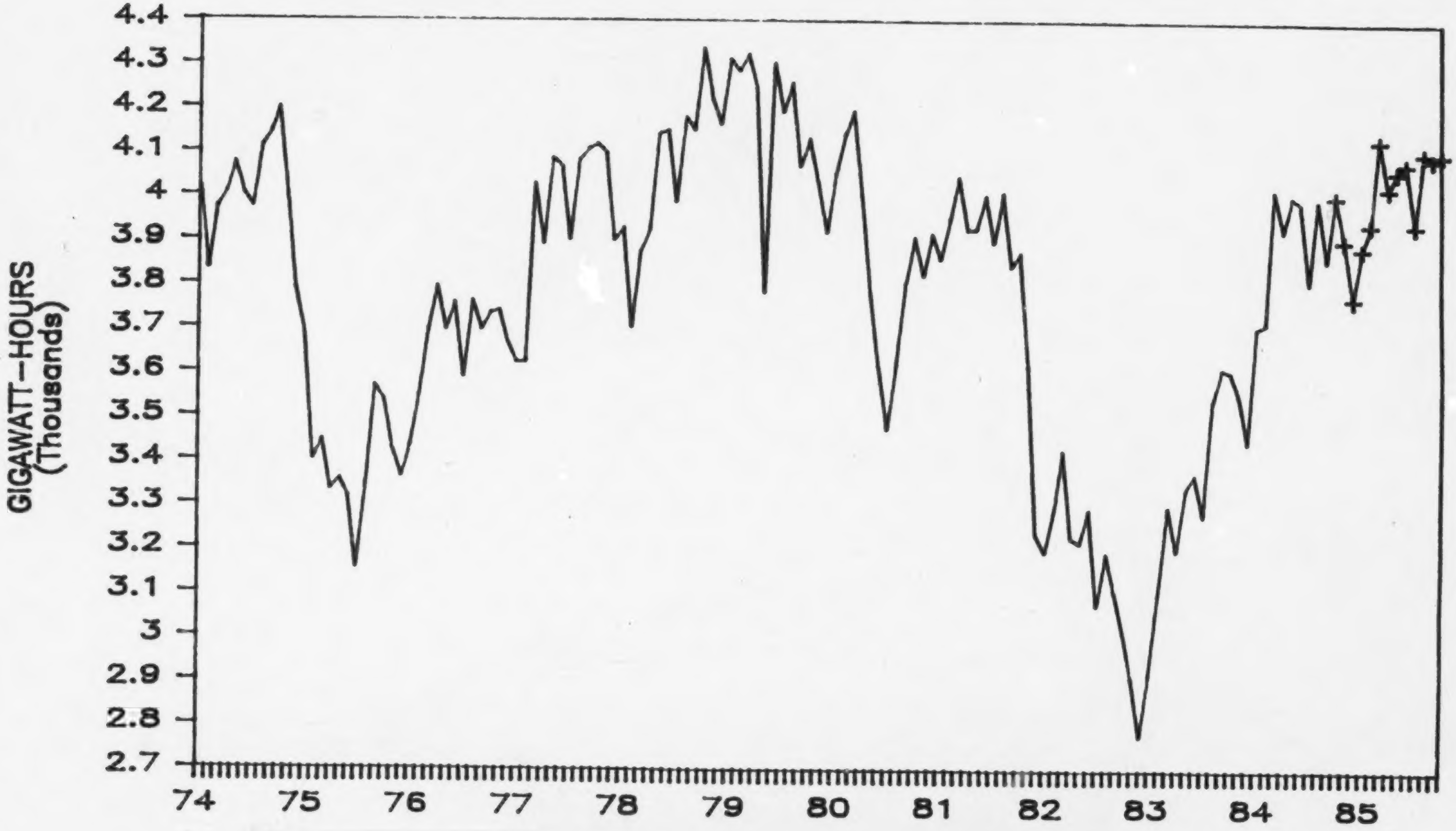
—— ACTUAL + PROJECTED

Table A-11: Independent Forecast of Ohio Electricity Demand
Industrial Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
November	3,297	3,904	4,510	3,554	9.8
December	3,125	3,773	4,421	3,447	9.5
January	3,199	3,887	4,574	3,708	4.8
February	3,218	3,943	4,667	3,719	6.0
March	3,373	4,133	4,893	4,020	2.8
April	3,230	4,024	4,818	3,927	2.5
May	3,217	4,063	4,910	4,006	1.4
June	3,184	4,081	4,977	3,992	2.2
July	2,998	3,941	4,885	3,809	3.5
August	3,117	4,105	5,094	3,999	2.7
September	3,061	4,092	5,124	3,860	6.0
October	3,030	4,103	5,175		

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

FIG. A-3. MONTHLY OHIO INDUSTRIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - OCTOBER 1985)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE

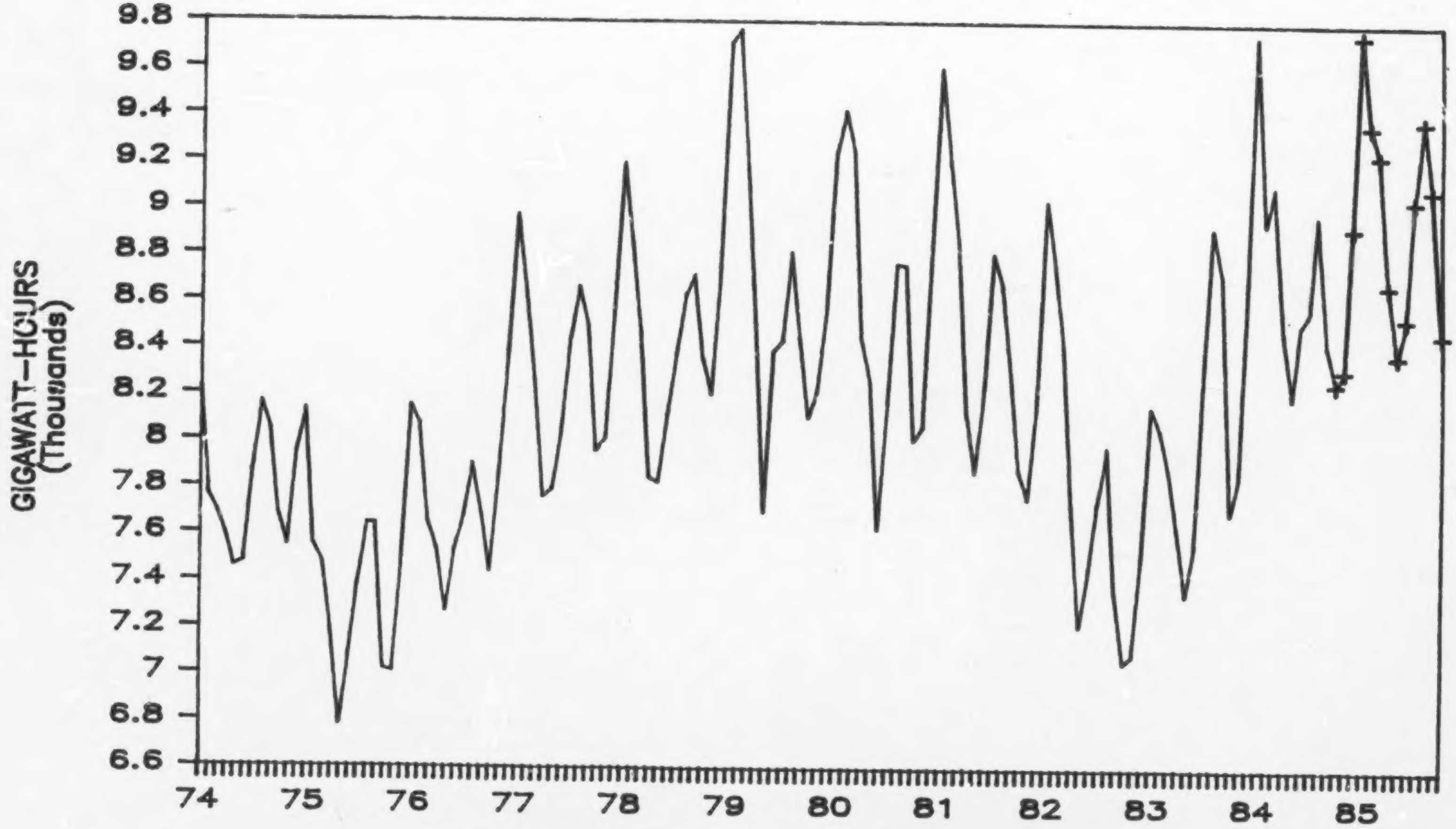
—— ACTUAL + PROJECTED

Table A-12: Independent Forecast of Ohio Electricity Demand
All Sectors
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1984-85)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
November	7,087	8,315	9,542	7,854	5.9
December	7,610	8,922	1,023	8,705	2.5
January	8,359	9,751	11,144	9,745	0.1
February	7,895	9,362	10,830	8,937	4.8
March	7,695	9,234	10,773	9,105	1.4
April	7,068	8,676	10,284	8,467	2.5
May	6,652	8,376	10,100	8,192	2.2
June	6,702	8,535	10,368	8,505	0.4
July	7,107	9,043	10,978	8,571	5.5
August	7,350	9,383	11,416	8,974	4.6
September	6,962	9,088	11,215	8,414	8.0
October	6,251	8,466	10,682		

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

FIG. A-4. MONTHLY TOTAL OHIO ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - OCTOBER 1985)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE
—— ACTUAL + PROJECTED

APPENDIX B: NATURAL GAS

Table B-1: Cincinnati Gas and Electric Forecast of Natural Gas Requirements (MMCF)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	7,102	7,116	0.20	7,100	-0.03
December	13,409	10,560	-21.25	12,500	-6.78
January	13,641	12,195	-10.60	14,200	4.10
February	8,984	10,423	16.02	10,800	20.21
March	10,506	8,630	-17.86	10,000	-4.82
April	5,693	5,908	3.78	5,700	0.12
May	3,599	3,832	6.47	3,600	0.03
June	2,365	2,555	8.03	2,400	1.48
July	2,381	2,411	1.26	2,350	-1.30
August	2,441	2,401	-1.64	2,400	-1.68
September	*	2,514	*	2,600	*
October	*	3,758	*	3,900	*

*Actual figures were not available.

Source: ODOE Form SG-2. and the Ohio Division of Energy.

Table B-2: Columbia Gas of Ohio
Forecast of Natural Gas Requirements
(MMCF)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	23,973	23,349	-2.60	25,000	4.28
December	42,589	30,661	-28.01	38,500	-9.60
January	44,941	36,345	-19.13	42,500	-5.43
February	30,376	31,376	3.29	33,000	8.64
March	36,170	25,581	-29.28	33,600	-7.11
April	19,292	17,408	-9.77	19,000	-1.51
May	12,935	10,980	-15.11	13,000	0.50
June	7,296	7,092	-2.80	7,000	-4.06
July	7,110	6,916	-2.73	7,000	-1.55
August	7,321	7,561	3.28	7,300	-0.29
September	*	8,315	*	9,300	*
October	*	12,840	*	17,300	*

*Actual figures were not available.

Source: SG-2. Forms of the reporting utility and the Ohio Division of Energy.

Table B-3: Dayton Power and Light Forecast of Natural Gas Requirements (MMCF)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	4,528	4,770	5.34	4,600	1.59
December	6,781	7,068	4.23	7,400	9.13
January	10,545	8,570	-18.73	10,300	-2.32
February	7,817	8,526	9.07	9,000	15.13
March	7,421	5,843	-21.26	7,100	-4.33
April	5,664	4,608	-18.64	5,800	2.40
May	3,051	2,325	-23.80	3,000	-1.67
June	1,915	1,503	-21.51	1,900	-0.78
July	1,484	1,502	1.21	1,400	-5.66
August	1,526	1,648	7.99	1,400	-8.26
September	*	1,612	*	1,500	*
October	*	2,678	*	2,400	*

*Actual figures were not available.

Source: SG-2. Forms of the reporting utility and the Ohio Division of Energy.

Table B-4: East Ohio Gas
Forecast of Natural Gas Requirements
(MMCF)

Month	Actual Demand (1983-1984)	Utility Forecast (1984-1985)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1984-1985)	%Change (ODOE Forecast vs. Actual)
November	29,703	28,785	-3.09	31,000	4.37
December	46,450	39,055	-15.92	44,900	-3.34
January	48,461	44,800	-7.55	48,000	-0.95
February	33,272	39,414	18.46	37,500	12.71
March	40,129	34,029	-15.20	37,800	-5.80
April	31,092	30,605	-1.57	31,500	1.31
May	26,189	26,005	-0.70	24,600	-6.07
June	17,491	20,429	16.80	18,000	2.91
July	16,548	18,559	12.15	16,700	0.92
August	17,344	18,225	5.08	17,400	0.32
September	*	20,462	*	18,900	*
October	*	26,161	*	26,100	*

*Actual figures were not available.

Source: SG-2. Forms of the reporting utility and the Ohio Division of Energy.

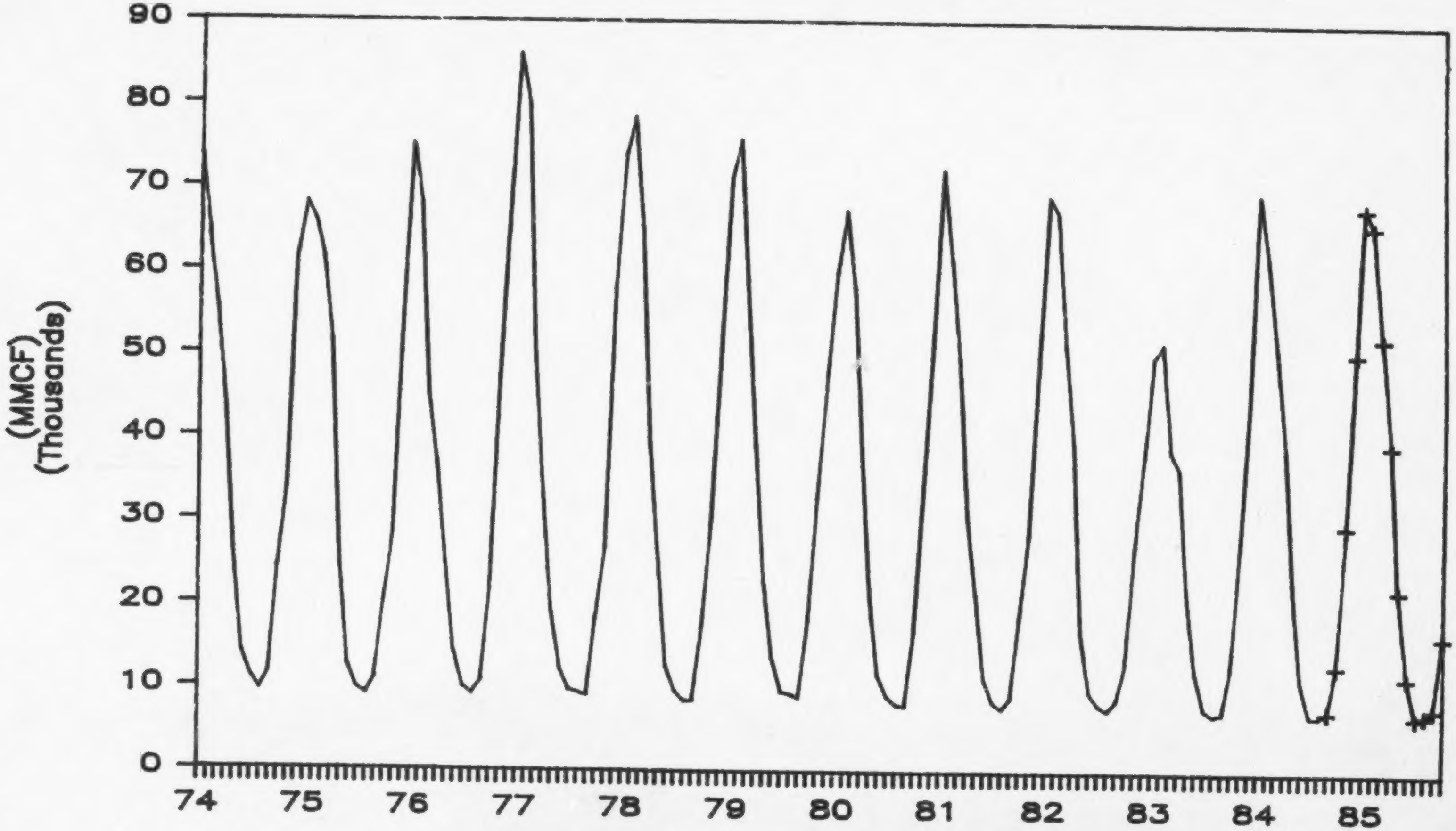
Table B-5: Independent Forecast of Ohio Natural Gas End User Requirements-Residential Sector (MMCF)

Month	Lower 95% Confidence Limit	Forecast (1984-1985)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
November	20,700	29,800	40,000	26,978	10.46
December	40,100	50,500	60,800	47,401	6.54
January	57,600	68,000	78,500	69,695	-2.43
February	55,300	65,800	76,300	61,863	6.36
March	41,800	52,300	62,800	51,212	2.12
April	31,000	39,500	47,900	38,993	1.30
May	18,600	22,100	27,600	21,988	0.51
June	7,900	11,700	15,600	10,876	7.58
July	5,000	7,000	9,000	7,053	-0.75
August	5,800	7,300	8,800	6,924	5.43
September	6,500	8,000	9,500	*	*
October	12,600	16,600	20,600	*	*

*Actual figures were not available.

Source: ODOE Form SG-1 and the Ohio Division of Energy.

FIG. B-1. MONTHLY OHIO RESIDENTIAL NATURAL GAS CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - OCTOBER 1985)



SOURCE: THE OHIO DIVISION OF ENERGY

—— ACTUAL + PROJECTED

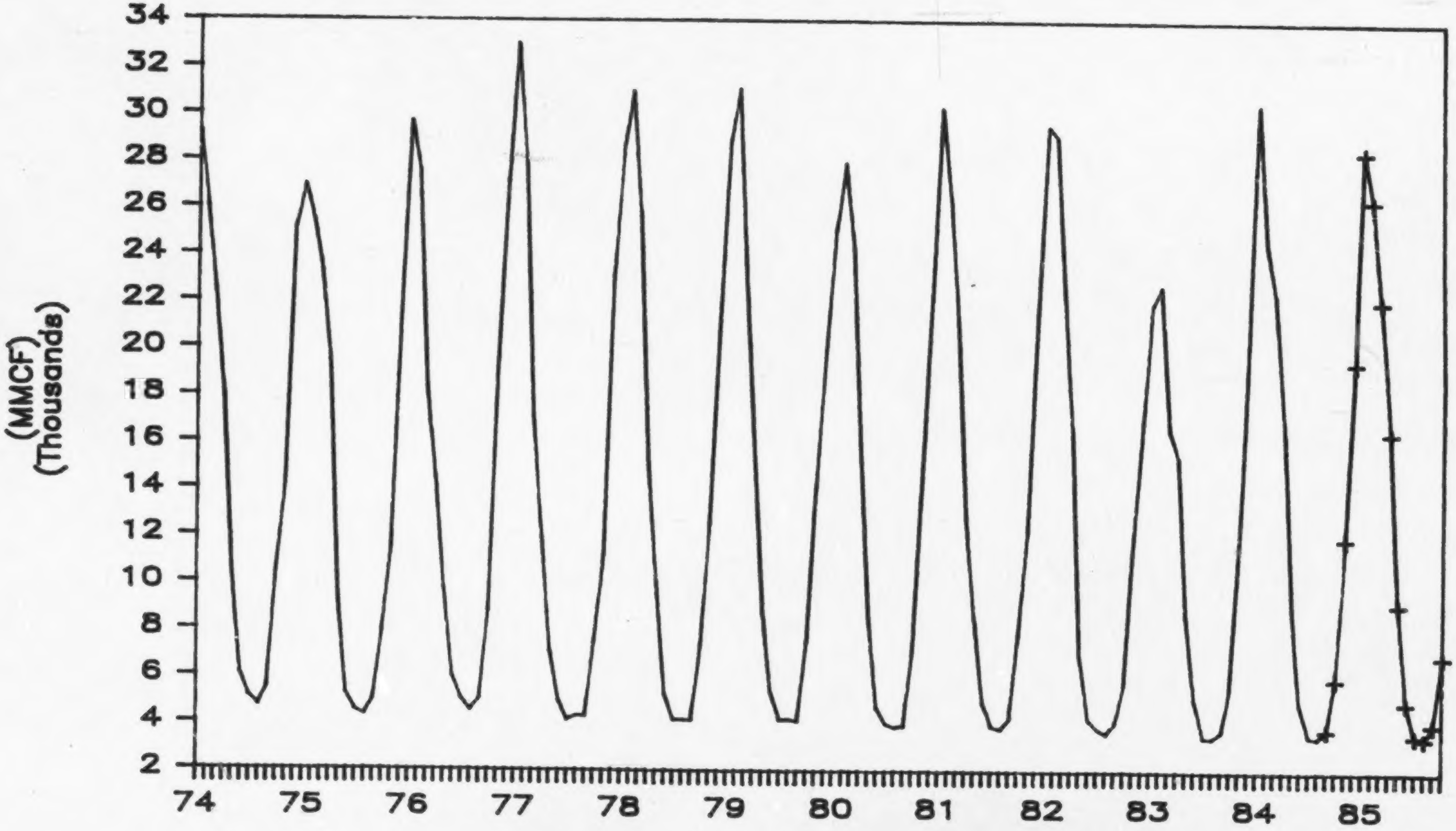
Table B-6: Independent Forecast of Ohio Natural Gas End User Requirements-Commercial Sector (MMCF)

Month	Lower 95% Confidence Limit	Forecast (1984-1985)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
November	10,000	12,000	14,000	11,725	2.35
December	17,000	19,500	22,000	20,872	-6.57
January	24,500	28,500	32,400	30,538	-6.67
February	22,400	26,400	30,300	24,405	8.17
March	18,100	22,100	26,000	22,273	-0.78
April	13,500	16,500	19,400	16,504	-0.02
May	7,500	9,200	11,500	8,990	2.34
June	4,300	5,000	6,400	4,903	1.98
July	2,800	3,600	4,300	3,562	1.07
August	2,800	3,500	4,200	3,480	0.57
September	3,500	4,100	4,600	*	*
October	5,300	7,000	8,700	*	*

*Actual figures were not available.

Source: ODOE Form SG-1 and the Ohio Division of Energy.

FIG. B-2. MONTHLY OHIO COMMERCIAL NATURAL GAS CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - OCTOBER 1985)



SOURCE: THE OHIO DIVISION OF ENERGY

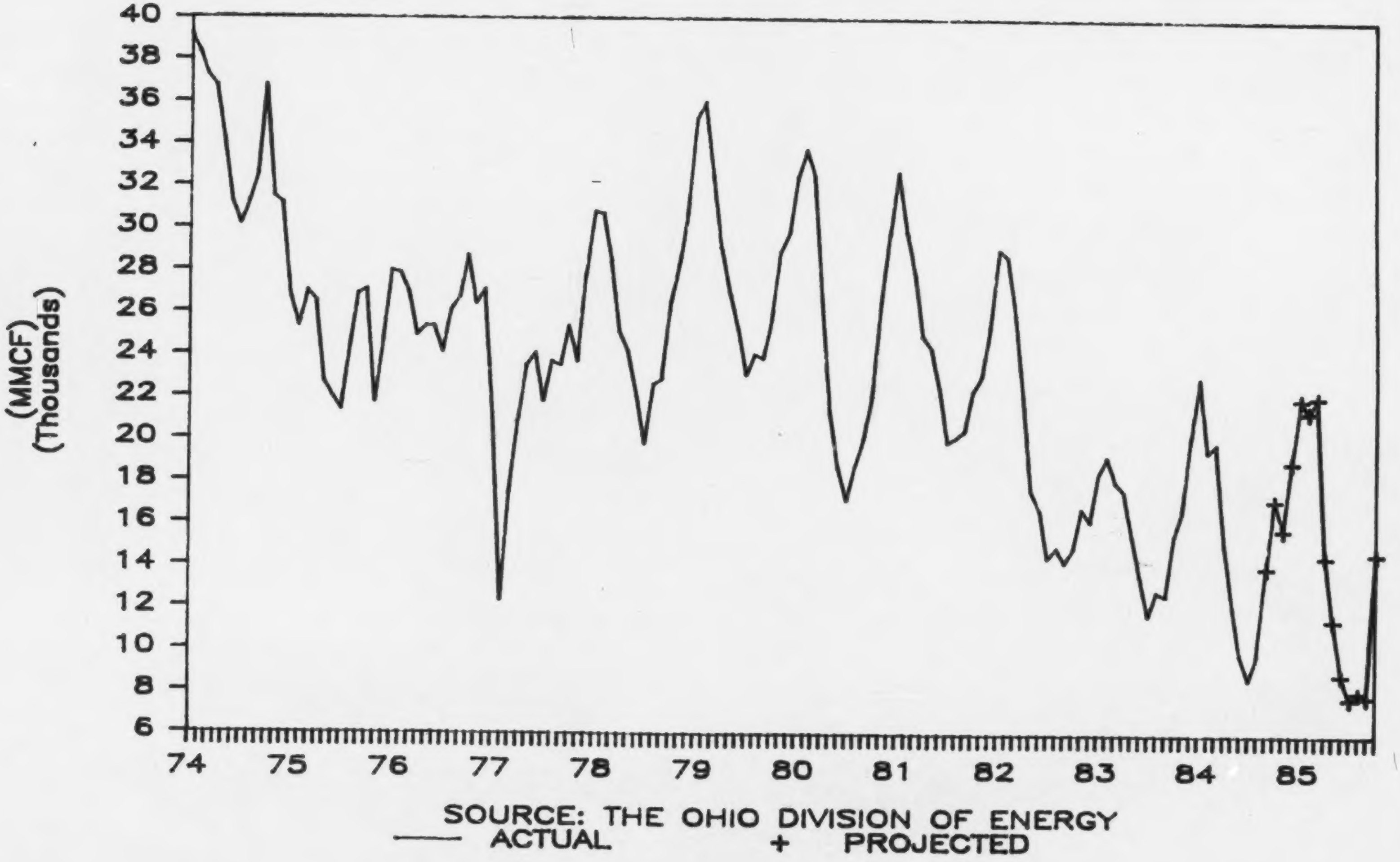
Table B-7: Independent Forecast of Ohio Natural Gas End User Requirements-Industrial Sector (MMCF)

Month	Lower 95% Confidence Limit	Forecast (1984-1985)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
November	14,800	15,800	19,800	16,695	-5.36
December	15,800	19,000	23,200	20,184	-5.87
January	18,000	22,000	26,000	22,979	-4.26
February	17,400	21,400	25,400	19,460	9.97
March	18,100	22,100	26,000	19,863	11.26
April	12,500	14,500	17,500	15,009	-3.39
May	9,200	11,500	13,800	12,161	-5.44
June	7,100	8,900	10,700	9,796	-9.15
July	6,500	7,800	9,100	8,644	-9.76
August	6,700	8,100	9,500	9,794	-17.30
September	6,900	7,900	8,900	*	*
October	13,500	14,700	15,800	*	*

*Actual figures were not available.

Source: ODOE Form SG-1 and the Ohio Division of Energy.

FIG. B-3. MONTHLY OHIO INDUSTRIAL NATURAL GAS CONSUMPTION ACTUAL AND PROJECTED (JANUARY 1974 - OCTOBER 1985)



SOURCE: THE OHIO DIVISION OF ENERGY

Table B-8: Independent Forecast of Ohio Natural Gas Requirements-Total-All Sectors (MMCF)

Month	Lower 95% Confidence Limit	Forecast (1984-1985)	Upper 95% Confidence Limit	Actual (1983-1984)	Forecast Percentage Change
November	60,300	70,000	78,700	68,668	1.94
December	87,100	108,200	129,300	114,585	-5.57
January	98,000	115,000	133,000	123,549	-6.92
February	8,100	93,000	104,000	84,756	9.73
March	86,000	104,000	122,000	99,081	4.96
April	51,000	63,000	75,000	65,057	-3.16
May	41,200	49,200	57,200	48,525	1.39
June	28,100	34,100	40,100	31,044	9.84
July	24,000	29,000	34,000	29,425	-1.44
August	24,100	29,100	34,100	30,744	-5.35
September	29,100	34,100	39,100	*	*
October	45,200	50,200	55,200	*	*

*Actual figures were not available.

Source: ODOE Form SG-1 and the Ohio Division of Energy.

FIG. B-4. MONTHLY TOTAL OHIO NATURAL GAS CONSUMPTION ACTUAL AND PROJECTED (JANUARY 1974 - OCTOBER 1985)

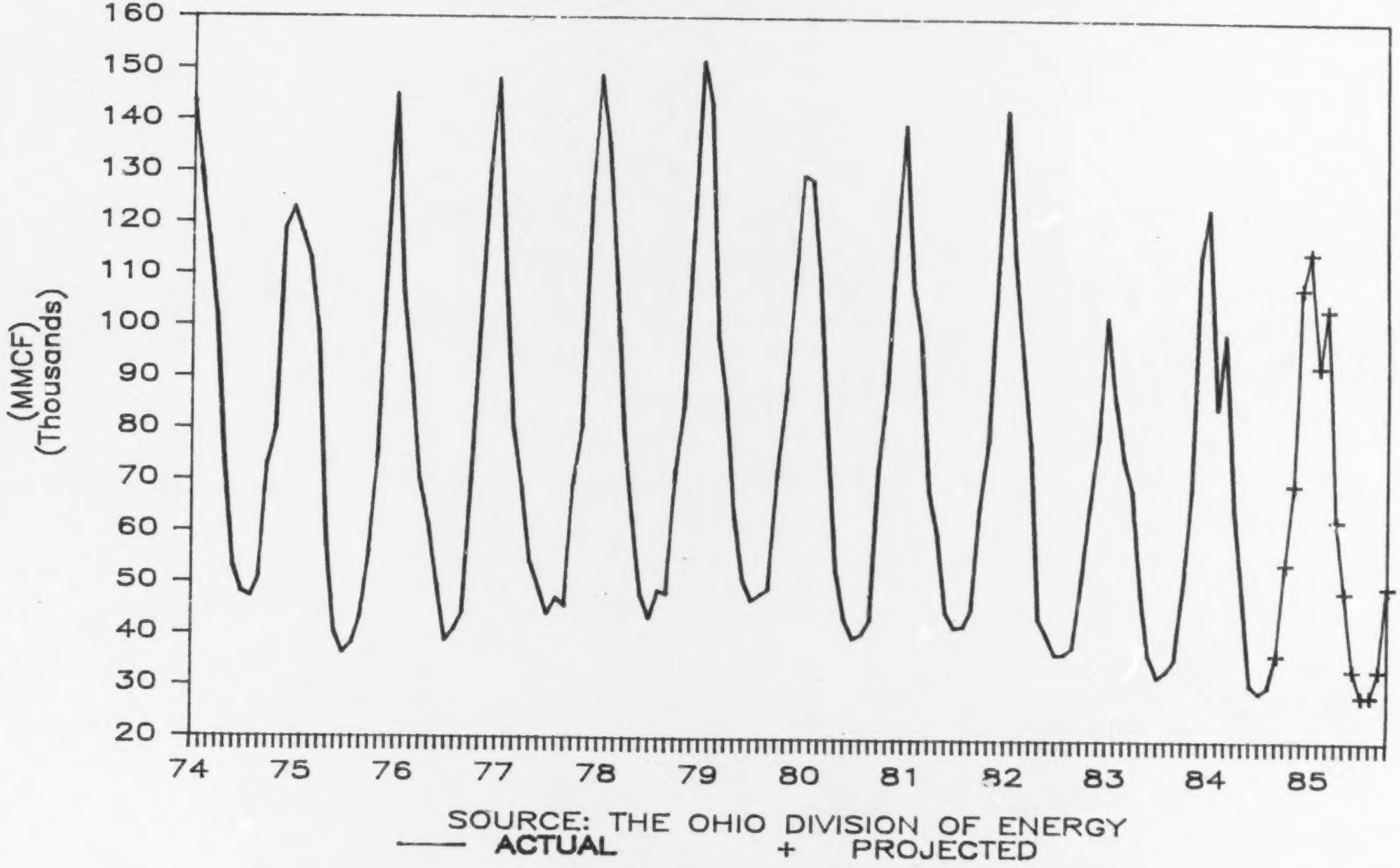


TABLE B-9 Projected Supply and Demand for Eight Major Ohio Natural Gas Utilities
(MMCF)

COMPANY: CINN. GAS & ELEC.

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	5/85	6/85	7/85	8/85	SUMMER	WINTER	YEAR
SUPPLY	2743	4064	7685	11265	12187	10678	8621	5832	3908	2770	2679	2401	24397	50436	74833
DEMAND	2743	4064	7685	11265	12187	10678	8621	5832	3908	2770	2679	2401	24397	50436	74833
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: COLUMBIA GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	5/85	6/85	7/85	8/85	SUMMER	WINTER	YEAR
SUPPLY	9202	14392	23379	30704	36374	31412	25609	17435	11033	7141	6916	7561	73680	147478	221158
DEMAND	9202	14392	23379	30704	36374	31412	25609	17435	11033	7141	6916	7561	73680	147478	221158
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: DAYTON POWER & LIGHT

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	5/85	6/85	7/85	8/85	SUMMER	WINTER	YEAR
SUPPLY	1856	3099	4770	7068	8570	8526	5843	4608	2325	1503	1502	1648	16541	34777	51318
DEMAND	1856	3099	4770	7068	8570	8526	5845	4608	2325	1503	1502	1648	16541	34779	51320
DEFICIENCY	0	0	0	0	0	0	2	0	0	0	0	0	0	2	2
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: EAST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	5/85	6/85	7/85	8/85	SUMMER	WINTER	YEAR
SUPPLY	21076	26924	27291	36550	42179	37260	31978	29370	25233	20567	19425	19371	161966	175258	337224
DEMAND	21076	26924	27291	36550	42179	37260	31978	29370	25233	20567	19425	19371	161966	175258	337224
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

TABLE B-9 Projected Supply and Demand for Eight Major Ohio Natural Gas Utilities (MMCF)

COMPANY: NATIONAL GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	5/85	6/85	7/85	8/85	SUMMER	WINTER	YEAR
SUPPLY	1090	1109	1136	1300	1569	1430	1329	1287	1199	1192	1175	1333	8385	6764	15149
DEMAND	1090	1109	1136	1281	1551	1408	1309	1280	840	1192	1175	1333	8019	6685	14704
DEFICIENCY	0	0	0	-19	-18	-22	-20	-7	-359	0	0	0	-366	-79	-445
% DEFICIENCY	0.0%	0.0%	0.0%	-1.5%	-1.2%	-1.6%	-1.5%	-0.5%	-42.7%	0.0%	0.0%	0.0%	-4.6%	-1.2%	-3.0%

COMPANY: OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	5/85	6/85	7/85	8/85	SUMMER	WINTER	YEAR
SUPPLY	282	525	662	886	1025	890	736	497	335	218	215	238	2310	4199	6509
DEMAND	282	525	662	886	1025	890	736	497	335	218	215	238	2310	4199	6509
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: RIVER GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	5/85	6/85	7/85	8/85	SUMMER	WINTER	YEAR
SUPPLY	175	274	385	533	624	553	433	308	215	183	173	159	1487	2528	4015
DEMAND	175	274	385	533	624	553	433	308	215	183	173	159	1487	2528	4015
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: WEST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/84	10/84	11/84	12/84	1/85	2/85	3/85	4/85	5/85	6/85	7/85	8/85	SUMMER	WINTER	YEAR
SUPPLY	460	776	1130	1393	1828	1694	1361	880	532	435	280	381	3744	7406	11150
DEMAND	460	776	1130	1393	1828	1694	1361	880	532	435	280	381	3744	7406	11150
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

FIG. B-5. ANNUAL OHIO NATURAL GAS CONSUMPTION AND PRICES: RESIDENTIAL SECTOR (1960 -1983)

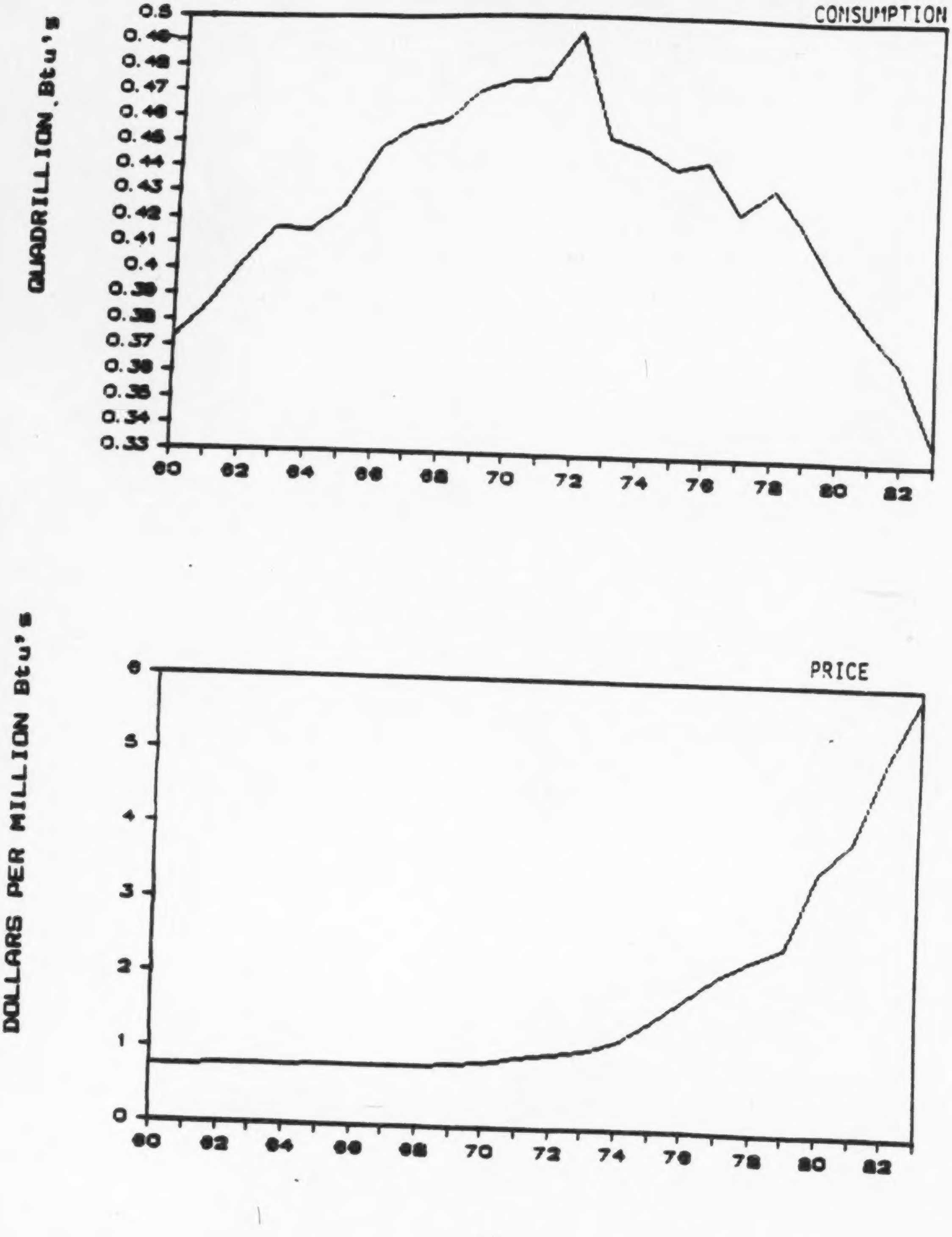


FIG. B-6. ANNUAL OHIO NATURAL GAS CONSUMPTION AND PRICES: COMMERCIAL SECTOR (1960 -1983)

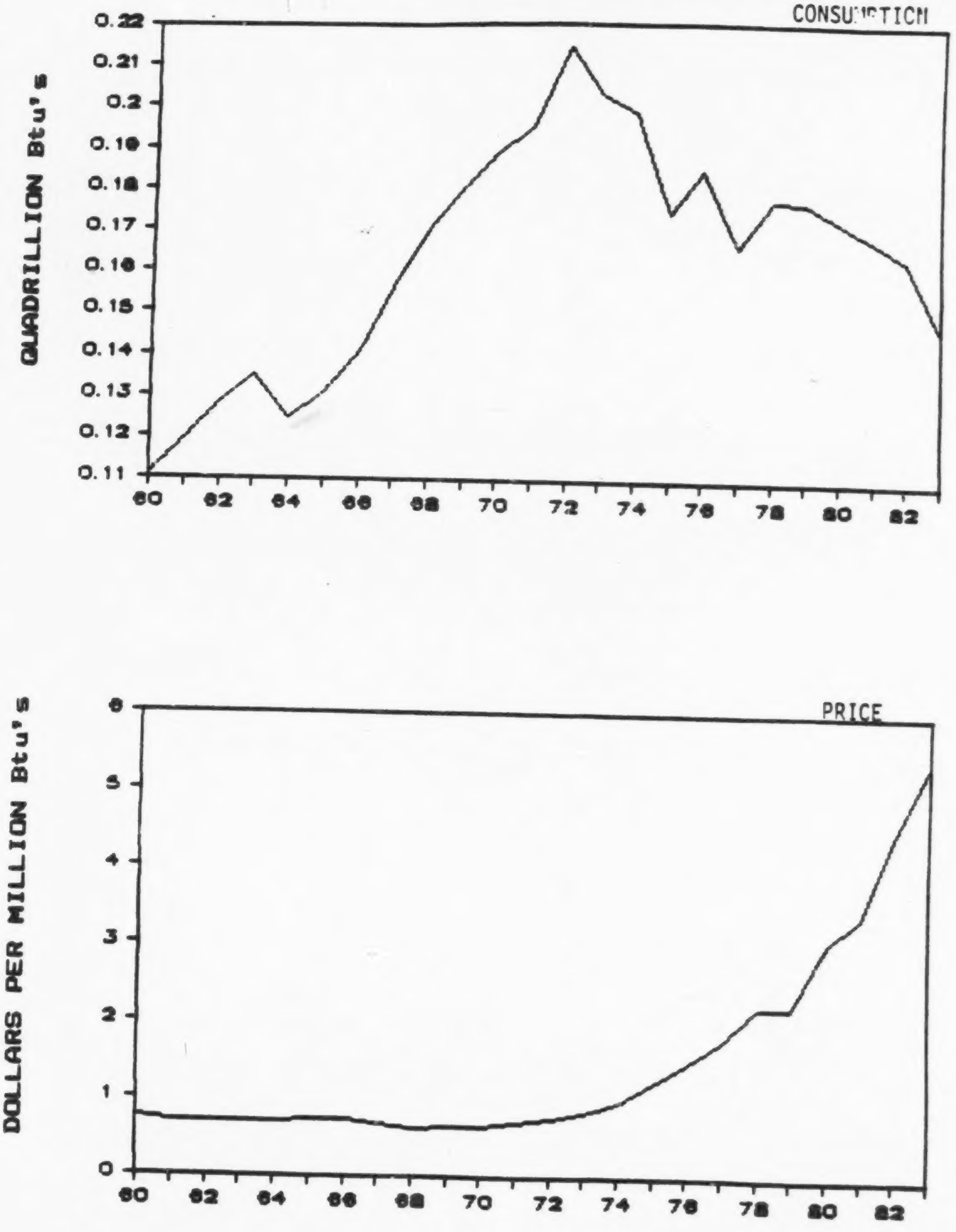


FIG. B-7. ANNUAL OHIO NATURAL GAS CONSUMPTION AND PRICES: INDUSTRIAL SECTOR (1960 -1983)

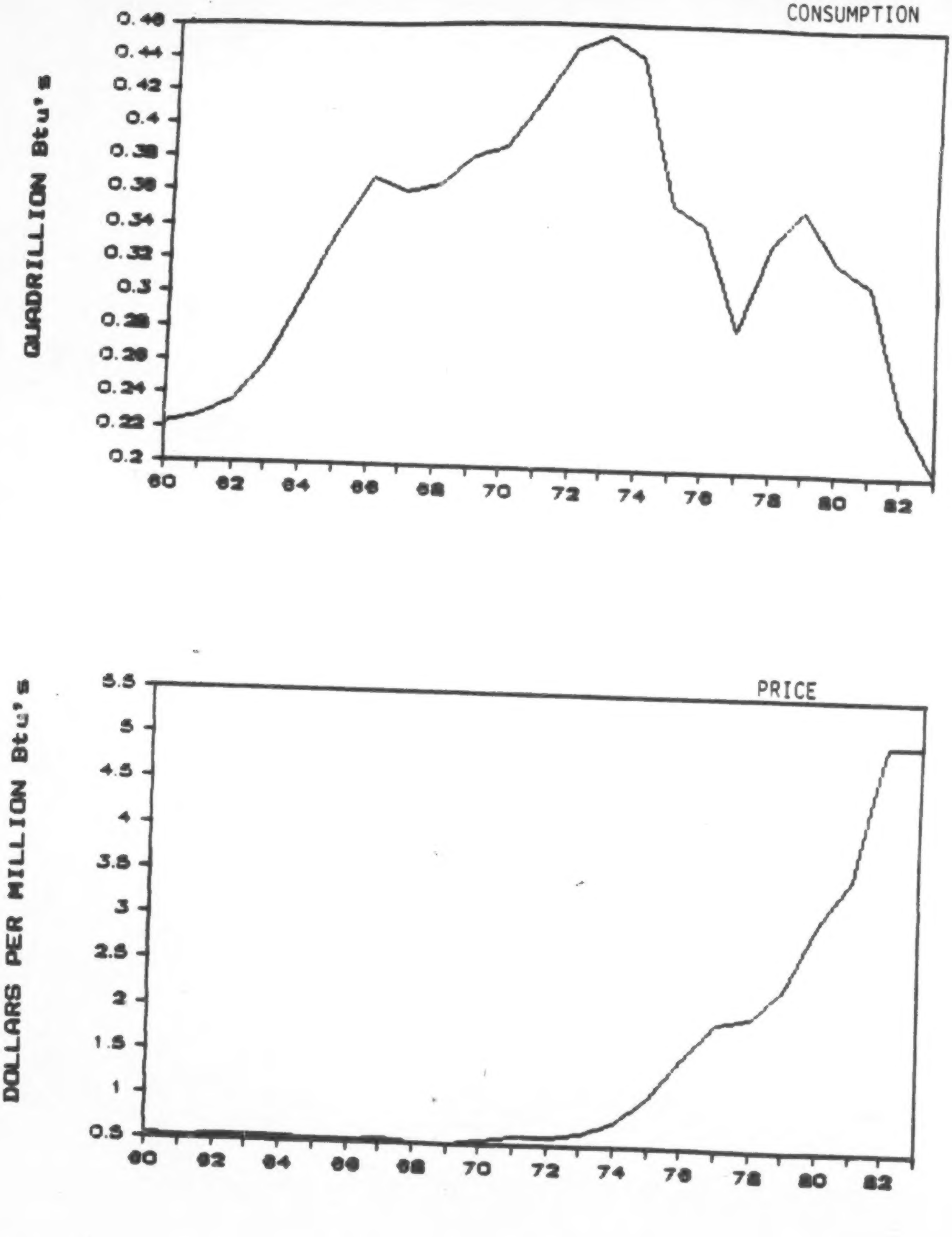


FIG. B-8. MONTHLY OHIO NATURAL GAS CONSUMPTION AND PRICES: TOTAL OF ALL SECTORS (1960 -1983)

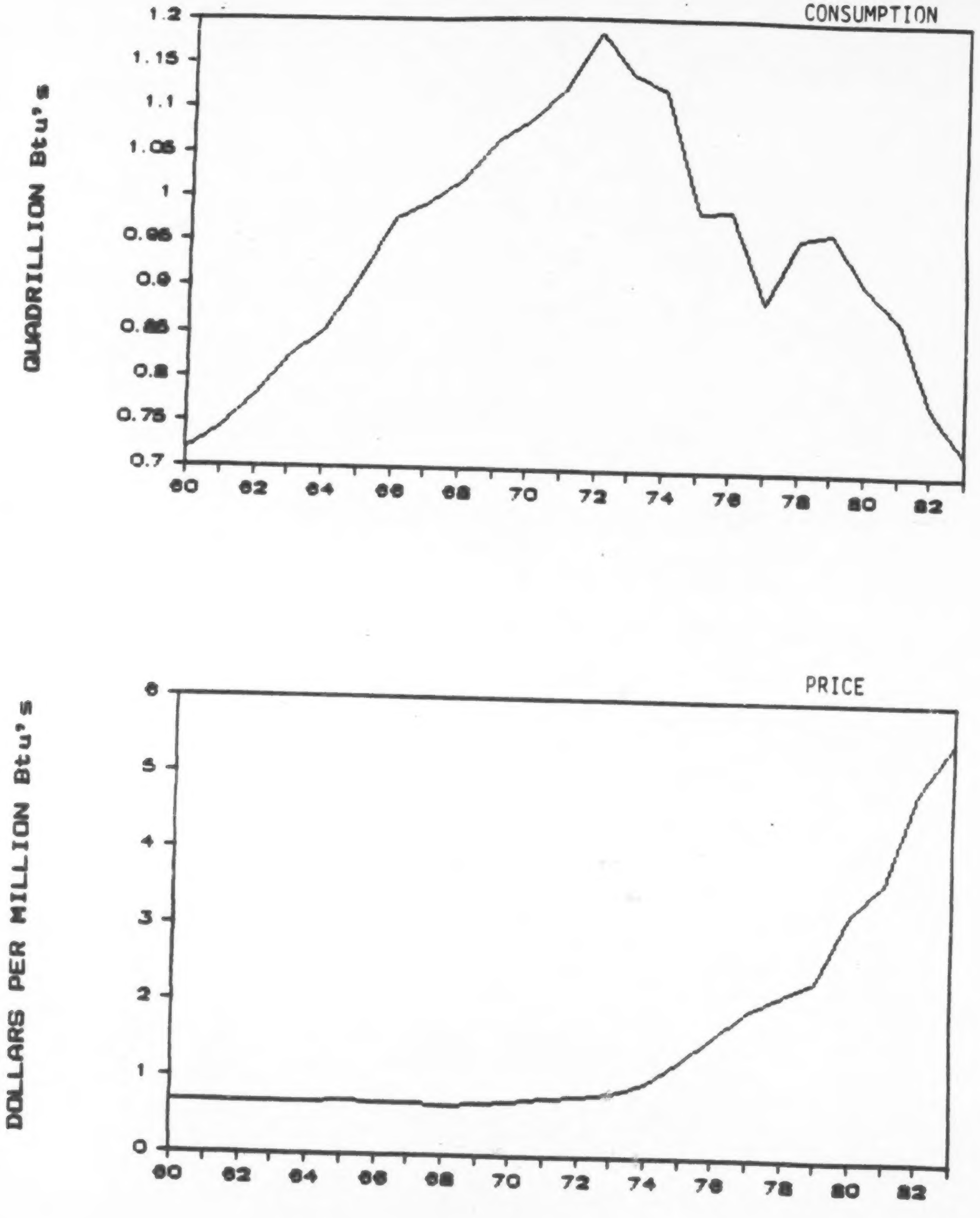


FIG. B-9. ANNUAL OHIO NATURAL GAS CONSUMPTION BY SECTOR (1960 - 1983)